

# Sequence Listing

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Eaton, Dan  
Ferrara, Napoleon  
Filvaroff, Ellen  
Fong, Sherman  
Gao, Wei-Qiang  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Hillan, Kenneth J.  
Kljavin, Ivar J.  
Kuo, Sophia S.  
Napier, Mary A.  
Pan, James;  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Shelton, David L.  
Stewart, Timothy A.  
Tumas, Daniel  
Williams, P. Mickey  
Wood, William I.

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				20					25				30	
Glu	Gln	Ala	Leu	Asn	Arg	Gly	Ile	Ala	Ala	Val	Lys	Glu	Asp	Ala
				35				40					45	
Val	Glu	Met	Leu	Ala	Ser	Tyr	Gly	Leu	Ala	Tyr	Ser	Leu	Met	Lys

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Phe	Phe	Thr	Gly	Pro	Met	Ser	Asp	Phe	Lys	Asn	Val	Gly	Leu	Val					
65										70					75				
Phe	Val	Asn	Ser	Lys	Arg	Asp	Arg	Thr	Lys	Ala	Val	Leu	Cys	Met					
80										85					90				
Val	Val	Ala	Gly	Ala	Ile	Ala	Ala	Val	Phe	His	Thr	Leu	Ile	Ala					
95										100					105				
Tyr	Ser	Asp	Leu	Gly	Tyr	Tyr	Ile	Ile	Asn	Lys	Leu	His	His	Val					
110										115					120				
Asp	Glu	Ser	Val	Gly	Ser	Lys	Thr	Arg	Arg	Ala	Phe	Leu	Tyr	Leu					
125										130					135				
Ala	Ala	Phe	Pro	Phe	Met	Asp	Ala	Met	Ala	Trp	Thr	His	Ala	Gly					
140										145					150				
Ile	Leu	Leu	Lys	His	Lys	Tyr	Ser	Phe	Leu	Val	Gly	Cys	Ala	Ser					
155										160					165				
Ile	Ser	Asp	Val	Ile	Ala	Gln	Val	Val	Phe	Val	Ala	Ile	Leu	Leu					
170										175					180				
His	Ser	His	Leu	Glu	Cys	Arg	Glu	Pro	Leu	Leu	Ile	Pro	Ile	Leu					
185										190					195				
Ser	Leu	Tyr	Met	Gly	Ala	Leu	Val	Arg	Cys	Thr	Thr	Leu	Cys	Leu					
200										205					210				
Gly	Tyr	Tyr	Lys	Asn	Ile	His	Asp	Ile	Ile	Pro	Asp	Arg	Ser	Gly					
215										220					225				
Pro	Glu	Leu	Gly	Gly	Asp	Ala	Thr	Ile	Arg	Lys	Met	Leu	Ser	Phe					
230										235					240				
Trp	Trp	Pro	Leu	Ala	Leu	Ile	Leu	Ala	Thr	Gln	Arg	Ile	Ser	Arg					
245										250					255				
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275										280					285				
Gly	His	Met	Pro	Tyr	Gly	Trp	Leu	Thr	Glu	Ile	Arg	Ala	Val	Tyr					
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305										310					315				
Ser	Asn	Thr	Val	Thr	Ala	Ala	His	Ile	Lys	Lys	Phe	Thr	Phe	Val					
320										325					330				
Cys	Met	Ala	Leu	Ser	Leu	Thr	Leu	Cys	Phe	Val	Met	Phe	Trp	Thr					
335										340					345				

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Phe	Ala	Phe	Ala	Glu	Leu	Cys	Val	Val	Pro	Leu	Arg	Ile	Phe	Ser
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Phe	Phe	Pro	Val	Pro	Val	Thr	Val	Arg	Ala	His	Leu	Thr	Gly	Trp
				380					385					390
Leu	Met	Thr	Leu	Lys	Lys	Thr	Phe	Val	Leu	Ala	Pro	Ser	Ser	Val
				395					400					405
Leu	Arg	Ile	Ile	Val	Leu	Ile	Ala	Ser	Leu	Val	Val	Leu	Pro	Tyr
				410					415					420
Leu	Gly	Val	His	Gly	Ala	Thr	Leu	Gly	Val	Gly	Ser	Leu	Leu	Ala
				425					430					435
Gly	Phe	Val	Gly	Glu	Ser	Thr	Met	Val	Ala	Ile	Ala	Ala	Cys	Tyr
				440					445					450
Val	Tyr	Arg	Lys	Gln	Lys	Lys	Lys	Met	Glu	Asn	Glu	Ser	Ala	Thr
				455					460					465
Glu	Gly	Glu	Asp	Ser	Ala	Met	Thr	Asp	Met	Pro	Pro	Thr	Glu	Glu
				470					475					480
Val	Thr	Asp	Ile	Val	Glu	Met	Arg	Glu	Glu	Asn	Glu			
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<210> 8

<211> 535

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 33, 66, 96, 387

<223> unknown base

<400> 8

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cggcctattg tcaacctctt tgtttcccg gaccttggtg gcagttctgc 150
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tgccatacgg ctggttgagc gaaatccgtg ctgtgtatcc tgctttcgac 250
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tctgtttcgt gatgttttgg acaccaacg tgtctgngaa aatcttgata 400
gacatcatcg gaggggactt tgcctttgca gaactctgtg ttgttccttt 450

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gcggatcttc tccttcttcc cagttccagt cacagtgagg gcgcatctca 500

ccgggtggct gatgacactg aagaaaacct tcgtc 535

<210> 9

<211> 434

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 32, 54, 80, 111, 117, 122, 139, 193, 205, 221, 226, 228, 273,  
293, 296, 305, 336, 358, 361

<223> unknown base

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caanaaattg gggagcaggg caaacacagn acgggcagcc cacatcaaga 100

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gttttgga caaaagtgt ttgagaaaat tttgatagac atnatcggag 200

tggantttgc ctttgcagaa ntttgnngtg ttcctttgcg gattttctcc 250

tttttcccag ttccagtcac agngagggcg catctcaccg gnggntgat 300

gacantgaag aaaacctttg tccttgcccc cagctntttg gtgcggatca 350

ttgtcctnat ngccagcctt gtggtcttac cctacctggg ggtgcacggt 400

gcgacctgg gcgtgggttc cctcctggcg ggca 434

<210> 10

<211> 154

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 33, 49, 68, 83, 90, 98, 119

<223> unknown base

<400> 10

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<211> 24

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<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<220>  
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<210> 13  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 13  
tcattctcttc cctctccc 18

<210> 14  
<211> 18  
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<400> 14  
ccttccgccca cggagttc 18

<210> 15  
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<220>  
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<210> 16  
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<400> 16  
gcctgctgtg gtcacaggtc tccg 24

<210> 17  
<211> 45  
<212> DNA  
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<210> 18  
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<213> Homo sapiens

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ctctgcccc tgcattctgt gcagctgtg ccccgccagc cgcaactcca 150  
ccgtgagccg cctcatcttc acgttcttcc tcttcctggg ggtgctgggtg 200  
tccatcatta tgctgagccc gggcgtggag agtcagctct acaagctgcc 250  
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<210> 19

<211> 457

<212> PRT

<213> Homo sapiens

<400> 19

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Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Ile	Leu	Cys	Ser	Cys	Cys	Pro
				20					25					30

Ala	Ser	Arg	Asn	Ser	Thr	Val	Ser	Arg	Leu	Ile	Phe	Thr	Phe	Phe
				35					40					45

Leu	Phe	Leu	Gly	Val	Leu	Val	Ser	Ile	Ile	Met	Leu	Ser	Pro	Gly
				50					55					60

Val	Glu	Ser	Gln	Leu	Tyr	Lys	Leu	Pro	Trp	Val	Cys	Glu	Glu	Gly	65	70	75
Ala	Gly	Ile	Pro	Thr	Val	Leu	Gln	Gly	His	Ile	Asp	Cys	Gly	Ser	80	85	90
Leu	Leu	Gly	Tyr	Arg	Ala	Val	Tyr	Arg	Met	Cys	Phe	Ala	Thr	Ala	95	100	105
Ala	Phe	Phe	Phe	Phe	Phe	Phe	Thr	Leu	Leu	Met	Leu	Cys	Val	Ser	110	115	120
Ser	Ser	Arg	Asp	Pro	Arg	Ala	Ala	Ile	Gln	Asn	Gly	Phe	Trp	Phe	125	130	135
Phe	Lys	Phe	Leu	Ile	Leu	Val	Gly	Leu	Thr	Val	Gly	Ala	Phe	Tyr	140	145	150
Ile	Pro	Asp	Gly	Ser	Phe	Thr	Asn	Ile	Trp	Phe	Tyr	Phe	Gly	Val	155	160	165
Val	Gly	Ser	Phe	Leu	Phe	Ile	Leu	Ile	Gln	Leu	Val	Leu	Leu	Ile	170	175	180
Asp	Phe	Ala	His	Ser	Trp	Asn	Gln	Arg	Trp	Leu	Gly	Lys	Ala	Glu	185	190	195
Glu	Cys	Asp	Ser	Arg	Ala	Trp	Tyr	Ala	Gly	Leu	Phe	Phe	Phe	Thr	200	205	210
Leu	Leu	Phe	Tyr	Leu	Leu	Ser	Ile	Ala	Ala	Val	Ala	Leu	Met	Phe	215	220	225
Met	Tyr	Tyr	Thr	Glu	Pro	Ser	Gly	Cys	His	Glu	Gly	Lys	Val	Phe	230	235	240
Ile	Ser	Leu	Asn	Leu	Thr	Phe	Cys	Val	Cys	Val	Ser	Ile	Ala	Ala	245	250	255
Val	Leu	Pro	Lys	Val	Gln	Asp	Ala	Gln	Pro	Asn	Ser	Gly	Leu	Leu	260	265	270
Gln	Ala	Ser	Val	Ile	Thr	Leu	Tyr	Thr	Met	Phe	Val	Thr	Trp	Ser	275	280	285
Ala	Leu	Ser	Ser	Ile	Pro	Glu	Gln	Lys	Cys	Asn	Pro	His	Leu	Pro	290	295	300
Thr	Gln	Leu	Gly	Asn	Glu	Thr	Val	Val	Ala	Gly	Pro	Glu	Gly	Tyr	305	310	315
Glu	Thr	Gln	Trp	Trp	Asp	Ala	Pro	Ser	Ile	Val	Gly	Leu	Ile	Ile	320	325	330
Phe	Leu	Leu	Cys	Thr	Leu	Phe	Ile	Ser	Leu	Arg	Ser	Ser	Asp	His	335	340	345
Arg	Gln	Val	Asn	Ser	Leu	Met	Gln	Thr	Glu	Glu	Cys	Pro	Pro	Met			

350	355	360
Leu Asp Ala Thr Gln Gln Gln Gln Gln Gln Val Ala Ala Cys Glu		
365	370	375
Gly Arg Ala Phe Asp Asn Glu Gln Asp Gly Val Thr Tyr Ser Tyr		
380	385	390
Ser Phe Phe His Phe Cys Leu Val Leu Ala Ser Leu His Val Met		
395	400	405
Met Thr Leu Thr Asn Trp Tyr Lys Pro Gly Glu Thr Arg Lys Met		
410	415	420
Ile Ser Thr Trp Thr Ala Val Trp Val Lys Ile Cys Ala Ser Trp		
425	430	435
Ala Gly Leu Leu Leu Tyr Leu Trp Thr Leu Val Ala Pro Leu Leu		
440	445	450
Leu Arg Asn Arg Asp Phe Ser		
455		

<210> 20  
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<210> 21  
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<220>  
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<400> 21  
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<210> 22  
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 <212> DNA  
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<220>  
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<400> 22  
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<210> 23  
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<212> DNA  
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 <220>  
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 <210> 27  
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 <212> DNA  
 <213> Homo sapiens  
  
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t 1351

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 <211> 285  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30

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Pro	Glu	Pro	Tyr	Tyr	Pro	Glu	Ser	Gly	Trp	Asp	Arg	Leu	Arg	Glu	50	55	60
Leu	Phe	Gly	Lys	Asp	Glu	Gln	Gln	Arg	Ile	Ser	Lys	Asp	Leu	Ala	65	70	75
Asn	Ile	Cys	Lys	Thr	Ala	Ala	Thr	Ala	Gly	Ile	Ile	Gly	Trp	Val	80	85	90
Tyr	Gly	Gly	Ile	Pro	Ala	Phe	Ile	His	Ala	Lys	Gln	Gln	Tyr	Ile	95	100	105
Glu	Gln	Ser	Gln	Ala	Glu	Ile	Tyr	His	Asn	Arg	Phe	Asp	Ala	Val	110	115	120
Gln	Ser	Ala	His	Arg	Ala	Ala	Thr	Arg	Gly	Phe	Ile	Arg	Tyr	Gly	125	130	135
Trp	Arg	Trp	Gly	Trp	Arg	Thr	Ala	Val	Phe	Val	Thr	Ile	Phe	Asn	140	145	150
Thr	Val	Asn	Thr	Ser	Leu	Asn	Val	Tyr	Arg	Asn	Lys	Asp	Ala	Leu	155	160	165
Ser	His	Phe	Val	Ile	Ala	Gly	Ala	Val	Thr	Gly	Ser	Leu	Phe	Arg	170	175	180
Ile	Asn	Val	Gly	Leu	Arg	Gly	Leu	Val	Ala	Gly	Gly	Ile	Ile	Gly	185	190	195
Ala	Leu	Leu	Gly	Thr	Pro	Val	Gly	Gly	Leu	Leu	Met	Ala	Phe	Gln	200	205	210
Lys	Tyr	Ala	Gly	Glu	Thr	Val	Gln	Glu	Arg	Lys	Gln	Lys	Asp	Arg	215	220	225
Lys	Ala	Leu	His	Glu	Leu	Lys	Leu	Glu	Glu	Trp	Lys	Gly	Arg	Leu	230	235	240
Gln	Val	Thr	Glu	His	Leu	Pro	Glu	Lys	Ile	Glu	Ser	Ser	Leu	Arg	245	250	255
Glu	Asp	Glu	Pro	Glu	Asn	Asp	Ala	Lys	Lys	Ile	Glu	Ala	Leu	Leu	260	265	270
Asn	Leu	Pro	Arg	Asn	Pro	Ser	Val	Ile	Asp	Lys	Gln	Asp	Lys	Asp	275	280	285

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<211> 324

<212> DNA

<213> Homo sapiens

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 ctacagcagg catcattggc tgggtgtatg ggggaatacc agcttttatt 200  
 catgctaaac aacaatacat tgagcagagc caggcagaaa tttatcataa 250  
 ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca cgaggcttca 300  
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<210> 30  
 <211> 377  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 262, 330, 371  
 <223> unknown base

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 gctgccgaag ctgtgactgc cgattcggaa gtccttgagg agcgtcagaa 150  
 ggggcttccc tacgtcccag agccctatta cccggaattt ggatgggacc 200  
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aagaactgcc tgtgcgcctt caacctgctt tacaccttgg ttagtctgct 250  
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gaatatgctg gagaggtttt gagatttggt ggtggcattg gcctgttctt 700



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<211> 204

<212> PRT

<213> Homo sapiens

<400> 36

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Ala	Ala	Trp	Gly	Ile	Gly	Phe	Gly	Leu	Ile	Ser	Ser	Leu	Arg	Val
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Val	Gly	Val	Val	Ile	Ala	Val	Gly	Ile	Phe	Leu	Phe	Leu	Ile	Ala
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Leu	Val	Gly	Leu	Ile	Gly	Ala	Val	Lys	His	His	Gln	Val	Leu	Leu
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Phe	Phe	Tyr	Met	Ile	Ile	Leu	Leu	Leu	Val	Phe	Ile	Val	Gln	Phe
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Ser	Val	Ser	Cys	Ala	Cys	Leu	Ala	Leu	Asn	Gln	Glu	Gln	Gln	Gly
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Gln	Leu	Leu	Glu	Val	Gly	Trp	Asn	Asn	Thr	Ala	Ser	Ala	Arg	Asn
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Asp	Ile	Gln	Arg	Asn	Leu	Asn	Cys	Cys	Gly	Phe	Arg	Ser	Val	Asn
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Pro	Asn	Asp	Thr	Cys	Leu	Ala	Ser	Cys	Val	Lys	Ser	Asp	His	Ser
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Cys	Ser	Pro	Cys	Ala	Pro	Ile	Ile	Gly	Glu	Tyr	Ala	Gly	Glu	Val
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Leu	Arg	Phe	Val	Gly	Gly	Ile	Gly	Leu	Phe	Phe	Ser	Phe	Thr	Glu
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Ile	Leu	Gly	Val	Trp	Leu	Thr	Tyr	Arg	Tyr	Arg	Asn	Gln	Lys	Asp
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 <212> DNA  
 <213> Homo sapiens

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 <221> unsure  
 <222> 20, 35, 61, 83, 106, 130, 133, 187, 232, 260, 336  
 <223> unknown base

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 aatacggcaa gtgctcgaaa tgacatccag agaaatntaa actgctgtgg 200  
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gaggttttga gatttggtgg tggcattggc ctgtntttca gttttacaga 350

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<210> 38

<211> 566

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 27

<223> unknown base

<400> 38

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tttttgactt ttacaggtaa gtgcaaagga gaagtgggtt catgaaatgt 200

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taatttgaag tctaaaagac tgcattttta aacaagttag tattaatgag 350

ttggcccacg tagcaaaaag atatttgatt atcttaaaaa ttgttaaata 400

ccgttttcat gaaagttctc agtattgtaa cagcaacttg tcaaacctaa 450

gcatatttga atatgatctc ccataatttg aaattgaaat cgtatttgtg 500

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gttgtgcccc acttgc 566

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<211> 264

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 84-85, 206

<223> unknown base

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aatcctaaac tgctgtgggt tccgaagtgt taacccaaat gacacctgtc 200

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ataggagaat atgc 264

<210> 40

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40

acccacgtct gcgttgctgc c 21

<210> 41

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 41

gagaatatgc tggagagg 18

<210> 42

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 42

aggaatgcac taggattcgc gcgg 24

<210> 43

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 43

ggcccaaaag gcaaggacaa agcagctgtc agggaaacctc cgccg 45

<210> 44

<211> 2061

<212> DNA

<213> Homo sapiens

<400> 44

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 <212> PRT  
 <213> Homo sapiens

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 Glu Thr Leu Gln Cys Glu Gly Pro Val Cys Thr Glu Glu Ser Ser  
 35 40 45  
 Cys His Thr Glu Asp Asp Leu Thr Asp Ala Arg Glu Ala Gly Phe  
 50 55 60  
 Gln Val Lys Ala Tyr Thr Phe Ser Glu Pro Phe His Leu Ile Val  
 65 70 75  
 Ser Tyr Asp Trp Leu Ile Leu Gln Gly Pro Ala Lys Pro Val Phe  
 80 85 90  
 Glu Gly Asp Leu Leu Val Leu Arg Cys Gln Ala Trp Gln Asp Trp  
 95 100 105  
 Pro Leu Thr Gln Val Thr Phe Tyr Arg Asp Gly Ser Ala Leu Gly  
 110 115 120  
 Pro Pro Gly Pro Asn Arg Glu Phe Ser Ile Thr Val Val Gln Lys  
 125 130 135  
 Ala Asp Ser Gly His Tyr His Cys Ser Gly Ile Phe Gln Ser Pro  
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Gln	Glu	Leu	Phe	Pro	Ala	Pro	Ile	Leu	Arg	Ala	Val	Pro	Ser	Ala	170	175	180
Glu	Pro	Gln	Ala	Gly	Ser	Pro	Met	Thr	Leu	Ser	Cys	Gln	Thr	Lys	185	190	195
Leu	Pro	Leu	Gln	Arg	Ser	Ala	Ala	Arg	Leu	Leu	Phe	Ser	Phe	Tyr	200	205	210
Lys	Asp	Gly	Arg	Ile	Val	Gln	Ser	Arg	Gly	Leu	Ser	Ser	Glu	Phe	215	220	225
Gln	Ile	Pro	Thr	Ala	Ser	Glu	Asp	His	Ser	Gly	Ser	Tyr	Trp	Cys	230	235	240
Glu	Ala	Ala	Thr	Glu	Asp	Asn	Gln	Val	Trp	Lys	Gln	Ser	Pro	Gln	245	250	255
Leu	Glu	Ile	Arg	Val	Gln	Gly	Ala	Ser	Ser	Ser	Ala	Ala	Pro	Pro	260	265	270
Thr	Leu	Asn	Pro	Ala	Pro	Gln	Lys	Ser	Ala	Ala	Pro	Gly	Thr	Ala	275	280	285
Pro	Glu	Glu	Ala	Pro	Gly	Pro	Leu	Pro	Pro	Pro	Pro	Thr	Pro	Ser	290	295	300
Ser	Glu	Asp	Pro	Gly	Phe	Ser	Ser	Pro	Leu	Gly	Met	Pro	Asp	Pro	305	310	315
His	Leu	Tyr	His	Gln	Met	Gly	Leu	Leu	Leu	Lys	His	Met	Gln	Asp	320	325	330
Val	Arg	Val	Leu	Leu	Gly	His	Leu	Leu	Met	Glu	Leu	Arg	Glu	Leu	335	340	345
Ser	Gly	His	Gln	Lys	Pro	Gly	Thr	Thr	Lys	Ala	Thr	Ala	Glu		350	355	

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<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

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<210> 47

<211> 18

<212> DNA

<213> Artificial Sequence

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<210> 52

<211> 321

<212> PRT

<213> Homo sapiens

<400> 52

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Asp	Asp	Arg	Ser	His	Tyr	Thr	Cys	Glu	Val	Thr	Trp	Gln	Thr	Pro	110	115	120	
Asp	Gly	Asn	Gln	Val	Val	Arg	Asp	Lys	Ile	Thr	Glu	Leu	Arg	Val	125	130	135	
Gln	Lys	Leu	Ser	Val	Ser	Lys	Pro	Thr	Val	Thr	Thr	Gly	Ser	Gly	140	145	150	
Tyr	Gly	Phe	Thr	Val	Pro	Gln	Gly	Met	Arg	Ile	Ser	Leu	Gln	Cys	155	160	165	
Gln	Ala	Arg	Gly	Ser	Pro	Pro	Ile	Ser	Tyr	Ile	Trp	Tyr	Lys	Gln	170	175	180	

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Leu Leu Phe Lys	Pro Ala Val Ile Ala Asp	Ser Gly Ser Tyr Phe	200	205	210
Cys Thr Ala Lys	Gly Gln Val Gly Ser Glu	Gln His Ser Asp Ile	215	220	225
Val Lys Phe Val	Val Lys Asp Ser Ser Lys	Leu Leu Lys Thr Lys	230	235	240
Thr Glu Ala Pro	Thr Thr Met Thr Tyr Pro	Leu Lys Ala Thr Ser	245	250	255
Thr Val Lys Gln	Ser Trp Asp Trp Thr Thr	Asp Met Asp Gly Tyr	260	265	270
Leu Gly Glu Thr	Ser Ala Gly Pro Gly Lys	Ser Leu Pro Val Phe	275	280	285
Ala Ile Ile Leu	Ile Ile Ser Leu Cys Cys	Met Val Val Phe Thr	290	295	300
Met Ala Tyr Ile	Met Leu Cys Arg Lys Thr	Ser Gln Gln Glu His	305	310	315
Val Tyr Glu Ala	Ala Arg		320		

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 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 53  
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<210> 54  
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<220>  
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<400> 54  
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<210> 55  
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 <212> DNA  
 <213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 55

cttcacaatg tcgctgtgct gctc 24

<210> 56

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 56

agccaaatcc agcagctggc ttac 24

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 57

tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat 50

<210> 58

<211> 2458

<212> DNA

<213> Homo sapiens

<400> 58

gcgccgggag cccatctgcc cccaggggca cggggcgcg ggcgggtcc 50

cgcccggcac atggctgcag ccacctcgcg cgcaccccga ggcgccgcgc 100

ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150

agcaactgag cggggaagcg cccgcgtccg gggatcgga tgtccctcct 200

ccttctcctc ttgctagttt cctactatgt tggaaacctg gggactcaca 250

ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300

caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350

cgataatgaa gggaaccaa aagtggatgat cacttactcc agtcgtcatg 400

tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450

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 <211> 373  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Thr Leu Asp Ile Glu Trp Leu Leu Thr Asp Asn Glu Gly Asn Gln  
 50 55 60  
 Lys Val Val Ile Thr Tyr Ser Ser Arg His Val Tyr Asn Asn Leu  
 65 70 75  
 Thr Glu Glu Gln Lys Gly Arg Val Ala Phe Ala Ser Asn Phe Leu  
 80 85 90  
 Ala Gly Asp Ala Ser Leu Gln Ile Glu Pro Leu Lys Pro Ser Asp  
 95 100 105  
 Glu Gly Arg Tyr Thr Cys Lys Val Lys Asn Ser Gly Arg Tyr Val  
 110 115 120  
 Trp Ser His Val Ile Leu Lys Val Leu Val Arg Pro Ser Lys Pro  
 125 130 135  
 Lys Cys Glu Leu Glu Gly Glu Leu Thr Glu Gly Ser Asp Leu Thr  
 140 145 150  
 Leu Gln Cys Glu Ser Ser Ser Gly Thr Glu Pro Ile Val Tyr Tyr  
 155 160 165  
 Trp Gln Arg Ile Arg Glu Lys Glu Gly Glu Asp Glu Arg Leu Pro  
 170 175 180

Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu	185	190	195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala	200	205	210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val	215	220	225
Gln	Tyr	Val	Gln	Ser	Ile	Gly	Met	Val	Ala	Gly	Ala	Val	Thr	Gly	230	235	240
Ile	Val	Ala	Gly	Ala	Leu	Leu	Ile	Phe	Leu	Leu	Val	Trp	Leu	Leu	245	250	255
Ile	Arg	Arg	Lys	Asp	Lys	Glu	Arg	Tyr	Glu	Glu	Glu	Glu	Arg	Pro	260	265	270
Asn	Glu	Ile	Arg	Glu	Asp	Ala	Glu	Ala	Pro	Lys	Ala	Arg	Leu	Val	275	280	285
Lys	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Ser	Arg	Ser	Ser	Arg	Ser	Gly	290	295	300
Ser	Ser	Ser	Thr	Arg	Ser	Thr	Ala	Asn	Ser	Ala	Ser	Arg	Ser	Gln	305	310	315
Arg	Thr	Leu	Ser	Thr	Asp	Ala	Ala	Pro	Gln	Pro	Gly	Leu	Ala	Thr	320	325	330
Gln	Ala	Tyr	Ser	Leu	Val	Gly	Pro	Glu	Val	Arg	Gly	Ser	Glu	Pro	335	340	345
Lys	Lys	Val	His	His	Ala	Asn	Leu	Thr	Lys	Ala	Glu	Thr	Thr	Pro	350	355	360
Ser	Met	Ile	Pro	Ser	Gln	Ser	Arg	Ala	Phe	Gln	Thr	Val			365	370	

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 60

ccagtgcaca gcaggcaacg aagc 24

<210> 61

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 61  
actaggctgt atgcctgggt gggc 24

<210> 62  
<211> 43  
<212> DNA  
<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 62  
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<210> 63  
<211> 3534  
<212> DNA  
<213> Homo sapiens

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<210> 64

<211> 655

<212> PRT

<213> Homo sapiens

<400> 64

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Arg Ile Ala Arg Arg Ala Thr Ala Thr Met Ile Ala Gly Ser Leu  
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Leu	Leu	Leu	Gly	Phe	Leu	Ser	Thr	Thr	Thr	Ala	Gln	Pro	Glu	Gln	35	40	45
Lys	Ala	Ser	Asn	Leu	Ile	Gly	Thr	Tyr	Arg	His	Val	Asp	Arg	Ala	50	55	60
Thr	Gly	Gln	Val	Leu	Thr	Cys	Asp	Lys	Cys	Pro	Ala	Gly	Thr	Tyr	65	70	75
Val	Ser	Glu	His	Cys	Thr	Asn	Thr	Ser	Leu	Arg	Val	Cys	Ser	Ser	80	85	90
Cys	Pro	Val	Gly	Thr	Phe	Thr	Arg	His	Glu	Asn	Gly	Ile	Glu	Lys	95	100	105
Cys	His	Asp	Cys	Ser	Gln	Pro	Cys	Pro	Trp	Pro	Met	Ile	Glu	Lys	110	115	120
Leu	Pro	Cys	Ala	Ala	Leu	Thr	Asp	Arg	Glu	Cys	Thr	Cys	Pro	Pro	125	130	135
Gly	Met	Phe	Gln	Ser	Asn	Ala	Thr	Cys	Ala	Pro	His	Thr	Val	Cys	140	145	150
Pro	Val	Gly	Trp	Gly	Val	Arg	Lys	Lys	Gly	Thr	Glu	Thr	Glu	Asp	155	160	165
Val	Arg	Cys	Lys	Gln	Cys	Ala	Arg	Gly	Thr	Phe	Ser	Asp	Val	Pro	170	175	180
Ser	Ser	Val	Met	Lys	Cys	Lys	Ala	Tyr	Thr	Asp	Cys	Leu	Ser	Gln	185	190	195
Asn	Leu	Val	Val	Ile	Lys	Pro	Gly	Thr	Lys	Glu	Thr	Asp	Asn	Val	200	205	210
Cys	Gly	Thr	Leu	Pro	Ser	Phe	Ser	Ser	Ser	Thr	Ser	Pro	Ser	Pro	215	220	225
Gly	Thr	Ala	Ile	Phe	Pro	Arg	Pro	Glu	His	Met	Glu	Thr	His	Glu	230	235	240
Val	Pro	Ser	Ser	Thr	Tyr	Val	Pro	Lys	Gly	Met	Asn	Ser	Thr	Glu	245	250	255
Ser	Asn	Ser	Ser	Ala	Ser	Val	Arg	Pro	Lys	Val	Leu	Ser	Ser	Ile	260	265	270
Gln	Glu	Gly	Thr	Val	Pro	Asp	Asn	Thr	Ser	Ser	Ala	Arg	Gly	Lys	275	280	285
Glu	Asp	Val	Asn	Lys	Thr	Leu	Pro	Asn	Leu	Gln	Val	Val	Asn	His	290	295	300
Gln	Gln	Gly	Pro	His	His	Arg	His	Ile	Leu	Lys	Leu	Leu	Pro	Ser	305	310	315
Met	Glu	Ala	Thr	Gly	Gly	Glu	Lys	Ser	Ser	Thr	Pro	Ile	Lys	Gly			

320	325	330
Pro Lys Arg Gly His 335	Pro Arg Gln Asn Leu 340	His Lys His Phe Asp 345
Ile Asn Glu His Leu 350	Pro Trp Met Ile Val 355	Leu Phe Leu Leu Leu 360
Val Leu Val Val Ile 365	Val Val Cys Ser Ile 370	Arg Lys Ser Ser Arg 375
Thr Leu Lys Lys Gly 380	Pro Arg Gln Asp Pro 385	Ser Ala Ile Val Glu 390
Lys Ala Gly Leu Lys 395	Lys Ser Met Thr Pro 400	Thr Gln Asn Arg Glu 405
Lys Trp Ile Tyr Tyr 410	Cys Asn Gly His Gly 415	Ile Asp Ile Leu Lys 420
Leu Val Ala Ala Gln 425	Val Gly Ser Gln Trp 430	Lys Asp Ile Tyr Gln 435
Phe Leu Cys Asn Ala 440	Ser Glu Arg Glu Val 445	Ala Ala Phe Ser Asn 450
Gly Tyr Thr Ala Asp 455	His Glu Arg Ala Tyr 460	Ala Ala Leu Gln His 465
Trp Thr Ile Arg Gly 470	Pro Glu Ala Ser Leu 475	Ala Gln Leu Ile Ser 480
Ala Leu Arg Gln His 485	Arg Arg Asn Asp Val 490	Val Glu Lys Ile Arg 495
Gly Leu Met Glu Asp 500	Thr Thr Gln Leu Glu 505	Thr Asp Lys Leu Ala 510
Leu Pro Met Ser Pro 515	Ser Pro Leu Ser Pro 520	Ser Pro Ile Pro Ser 525
Pro Asn Ala Lys Leu 530	Glu Asn Ser Ala Leu 535	Leu Thr Val Glu Pro 540
Ser Pro Gln Asp Lys 545	Asn Lys Gly Phe Phe 550	Val Asp Glu Ser Glu 555
Pro Leu Leu Arg Cys 560	Asp Ser Thr Ser Ser 565	Gly Ser Ser Ala Leu 570
Ser Arg Asn Gly Ser 575	Phe Ile Thr Lys Glu 580	Lys Lys Asp Thr Val 585
Leu Arg Gln Val Arg 590	Leu Asp Pro Cys Asp 595	Leu Gln Pro Ile Phe 600
Asp Asp Met Leu His 605	Phe Leu Asn Pro Glu 610	Glu Leu Arg Val Ile 615

Glu Glu Ile Pro Gln Ala Glu Asp Lys Leu Asp Arg Leu Phe Glu  
620 625 630

Ile Ile Gly Val Lys Ser Gln Glu Ala Ser Gln Thr Leu Leu Asp  
635 640 645

Ser Val Tyr Ser His Leu Pro Asp Leu Leu  
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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 65

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<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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<210> 67

<211> 50

<212> DNA

<213> Artificial Sequence

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<400> 67

acgatgatcg cgggctccct tctcttgctt ggattcctta gcaccaccac 50

<210> 68

<211> 2412

<212> DNA

<213> Homo sapiens

<400> 68

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acattttttgg gactcgggaa ttatgaggta gaggtggagg cggagccgga 100

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ataagtctctg ttgcaccaga tgcagatgct gttgctgcac agatcctgtc 250

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 atttgggtgt tgacgtatta ttgtccttg attccaaata atatgtttcc 2350  
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<210> 69  
 <211> 453  
 <212> PRT  
 <213> Homo sapiens

<400> 69  
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 35 40 45  
 Leu Lys Phe Phe Pro Ile Ile Val Ile Gly Ile Ile Ala Leu Ile  
 50 55 60  
 Leu Ala Leu Ala Ile Gly Leu Gly Ile His Phe Asp Cys Ser Gly  
 65 70 75  
 Lys Tyr Arg Cys Arg Ser Ser Phe Lys Cys Ile Glu Leu Ile Ala  
 80 85 90  
 Arg Cys Asp Gly Val Ser Asp Cys Lys Asp Gly Glu Asp Glu Tyr  
 95 100 105  
 Arg Cys Val Arg Val Gly Gly Gln Asn Ala Val Leu Gln Val Phe

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Val	Ser	Ser	Asp	Asn	Leu	Arg	Val	Ser	Ser	Leu	Glu	Gly	Gln	Phe			
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Arg	Glu	Glu	Phe	Val	Ser	Ile	Asp	His	Leu	Leu	Pro	Asp	Asp	Lys			
				170					175					180			
Val	Thr	Ala	Leu	His	His	Ser	Val	Tyr	Val	Arg	Glu	Gly	Cys	Ala			
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Ser	Gly	His	Val	Val	Thr	Leu	Gln	Cys	Thr	Ala	Cys	Gly	His	Arg			
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Arg	Gly	Tyr	Ser	Ser	Arg	Ile	Val	Gly	Gly	Asn	Met	Ser	Leu	Leu			
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Ser	Gln	Trp	Pro	Trp	Gln	Ala	Ser	Leu	Gln	Phe	Gln	Gly	Tyr	His			
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Leu	Cys	Gly	Gly	Ser	Val	Ile	Thr	Pro	Leu	Trp	Ile	Ile	Thr	Ala			
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Ala	His	Cys	Val	Tyr	Asp	Leu	Tyr	Leu	Pro	Lys	Ser	Trp	Thr	Ile			
				260					265					270			
Gln	Val	Gly	Leu	Val	Ser	Leu	Leu	Asp	Asn	Pro	Ala	Pro	Ser	His			
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				305					310					315			
Phe	Asn	Glu	Met	Ile	Gln	Pro	Val	Cys	Leu	Pro	Asn	Ser	Glu	Glu			
				320					325					330			
Asn	Phe	Pro	Asp	Gly	Lys	Val	Cys	Trp	Thr	Ser	Gly	Trp	Gly	Ala			
				335					340					345			
Thr	Glu	Asp	Gly	Gly	Asp	Ala	Ser	Pro	Val	Leu	Asn	His	Ala	Ala			
				350					355					360			
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				365					370					375			
Gly	Gly	Ile	Ile	Ser	Pro	Ser	Met	Leu	Cys	Ala	Gly	Tyr	Leu	Thr			
				380					385					390			
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Cys Gln Glu Arg Arg Leu Trp Lys Leu Val Gly Ala Thr Ser Phe  
 410 415 420

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Leu Lys Thr

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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

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<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

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<210> 72

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 72

cgttcaatgc agaaatgac cagcctgtgt gcctgcccac ctctgaagag 50

<210> 73

<211> 3305

<212> DNA

<213> Homo sapiens

<400> 73

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gctcagcggc ggcgcgggcg ctgcgcgagg gctccggagc tgactcgccg 200

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ser Val Arg Ser Gly Asp Leu Trp Ile Pro Val Lys Ser Phe Asp  
 50 55 60  
 Ser Lys Asn His Pro Glu Val Leu Asn Ile Arg Leu Gln Arg Glu  
 65 70 75  
 Ser Lys Glu Leu Ile Ile Asn Leu Glu Arg Asn Glu Gly Leu Ile  
 80 85 90  
 Ala Ser Ser Phe Thr Glu Thr His Tyr Leu Gln Asp Gly Thr Asp  
 95 100 105  
 Val Ser Leu Ala Arg Asn Tyr Thr Gly His Cys Tyr Tyr His Gly  
 110 115 120  
 His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys  
 125 130 135  
 Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val  
 140 145 150  
 Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro  
 155 160 165  
 Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His  
 170 175 180  
 Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser  
 185 190 195  
 Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr  
 200 205 210

Lys Tyr Val Glu	Leu Val Ile Val Ala	Asp Asn Arg Glu Phe Gln
215	220	225
Arg Gln Gly Lys	Asp Leu Glu Lys Val	Lys Gln Arg Leu Ile Glu
230	235	240
Ile Ala Asn His	Val Asp Lys Phe Tyr	Arg Pro Leu Asn Ile Arg
245	250	255
Ile Val Leu Val	Gly Val Glu Val Trp	Asn Asp Met Asp Lys Cys
260	265	270
Ser Val Ser Gln	Asp Pro Phe Thr Ser	Leu His Glu Phe Leu Asp
275	280	285
Trp Arg Lys Met	Lys Leu Leu Pro Arg	Lys Ser His Asp Asn Ala
290	295	300
Gln Leu Val Ser	Gly Val Tyr Phe Gln	Gly Thr Thr Ile Gly Met
305	310	315
Ala Pro Ile Met	Ser Met Cys Thr Ala	Asp Gln Ser Gly Gly Ile
320	325	330
Val Met Asp His	Ser Asp Asn Pro Leu	Gly Ala Ala Val Thr Leu
335	340	345
Ala His Glu Leu	Gly His Asn Phe Gly	Met Asn His Asp Thr Leu
350	355	360
Asp Arg Gly Cys	Ser Cys Gln Met Ala	Val Glu Lys Gly Gly Cys
365	370	375
Ile Met Asn Ala	Ser Thr Gly Tyr Pro	Phe Pro Met Val Phe Ser
380	385	390
Ser Cys Ser Arg	Lys Asp Leu Glu Thr	Ser Leu Glu Lys Gly Met
395	400	405
Gly Val Cys Leu	Phe Asn Leu Pro Glu	Val Arg Glu Ser Phe Gly
410	415	420
Gly Gln Lys Cys	Gly Asn Arg Phe Val	Glu Glu Gly Glu Glu Cys
425	430	435
Asp Cys Gly Glu	Pro Glu Glu Cys Met	Asn Arg Cys Cys Asn Ala
440	445	450
Thr Thr Cys Thr	Leu Lys Pro Asp Ala	Val Cys Ala His Gly Leu
455	460	465
Cys Cys Glu Asp	Cys Gln Leu Lys Pro	Ala Gly Thr Ala Cys Arg
470	475	480
Asp Ser Ser Asn	Ser Cys Asp Leu Pro	Glu Phe Cys Thr Gly Ala
485	490	495
Ser Pro His Cys	Pro Ala Asn Val Tyr	Leu His Asp Gly His Ser

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				515					520					525
His	Glu	Gln	Gln	Cys	Val	Thr	Leu	Trp	Gly	Pro	Gly	Ala	Lys	Pro
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Ala	Pro	Gly	Ile	Cys	Phe	Glu	Arg	Val	Asn	Ser	Ala	Gly	Asp	Pro
				545					550					555
Tyr	Gly	Asn	Cys	Gly	Lys	Val	Ser	Lys	Ser	Ser	Phe	Ala	Lys	Cys
				560					565					570
Glu	Met	Arg	Asp	Ala	Lys	Cys	Gly	Lys	Ile	Gln	Cys	Gln	Gly	Gly
				575					580					585
Ala	Ser	Arg	Pro	Val	Ile	Gly	Thr	Asn	Ala	Val	Ser	Ile	Glu	Thr
				590					595					600
Asn	Ile	Pro	Leu	Gln	Gln	Gly	Gly	Arg	Ile	Leu	Cys	Arg	Gly	Thr
				605					610					615
His	Val	Tyr	Leu	Gly	Asp	Asp	Met	Pro	Asp	Pro	Gly	Leu	Val	Leu
				620					625					630
Ala	Gly	Thr	Lys	Cys	Ala	Asp	Gly	Lys	Ile	Cys	Leu	Asn	Arg	Gln
				635					640					645
Cys	Gln	Asn	Ile	Ser	Val	Phe	Gly	Val	His	Glu	Cys	Ala	Met	Gln
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Cys	His	Gly	Arg	Gly	Val	Cys	Asn	Asn	Arg	Lys	Asn	Cys	His	Cys
				665					670					675
Glu	Ala	His	Trp	Ala	Pro	Pro	Phe	Cys	Asp	Lys	Phe	Gly	Phe	Gly
				680					685					690
Gly	Ser	Thr	Asp	Ser	Gly	Pro	Ile	Arg	Gln	Ala	Glu	Ala	Arg	Gln
				695					700					705
Glu	Ala	Ala	Glu	Ser	Asn	Arg	Glu	Arg	Gly	Gln	Gly	Gln	Glu	Pro
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Val	Gly	Ser	Gln	Glu	His	Ala	Ser	Thr	Ala	Ser	Leu	Thr	Leu	Ile
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<211> 483

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 94, 143, 156, 163, 179, 193, 369, 371, 381, 390, 473

<223> unknown base

<400> 75

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 ctaccagga agtttgcaga aacagtgcaa ggaagggcag ganttcctgg 150  
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 gcagccctga taactggtnt ntggctgcaa nntaatgctn tgatatggct 400  
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<210> 76

<211> 27

<212> DNA

<213> Artificial Sequence

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<211> 18

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<220>

<223> Synthetic oligonucleotide probe

<400> 78

tacctgcacg atgggcac 18

<210> 79

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<212> DNA

<213> Artificial Sequence

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 <223> Synthetic oligonucleotide probe  
  
 <400> 79  
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 <210> 81  
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 <210> 84  
 <211> 1714  
 <212> DNA  
 <213> Homo sapiens  
  
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<211> 67  
<212> PRT  
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<400> 85  
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Thr Ser Met Pro Glu Ala Thr Ala Ala Glu Thr Thr Lys Pro Ser  
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<210> 86  
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<400> 86  
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<210> 87  
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<400> 88

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<210> 89

<211> 2956

<212> DNA

<213> Homo sapiens

<400> 89

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gctgctgctg ggccatggcg gcggcgggcg ctggggcgcc cgggcccagg 150

aggcggcgcg gcggcgggcg gacgggcccc ccgcggcaga cggcgaggac 200

ggacaggacc cgcacagcaa gcacctgtac acggccgaca tgttcacgca 250

cgggatccag agcgcgcgcg acttcgtcat gttcttcgcg ccctgggtgtg 300

gacactgccg gcggctgcag ccgacttgga atgacctggg agacaaatac 350

aacagcatgg aagatgccaa agtctatgtg gctaaagtgg actgcacggc 400

ccactccgac gtgtgctccg cccagggggg gcgaggatac cccaccttaa 450

agcttttcaa gccaggccaa gaagctgtga agtaccaggg tcctcgggac 500

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 ttttaa 2956

<210> 90  
 <211> 432  
 <212> PRT  
 <213> Homo sapiens

<400> 90

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Gly	Gly	Arg	Trp	Gly	Ala	Arg	Ala	Gln	Glu	Ala	Ala	Ala	Ala	Ala	35	40	45	
Ala	Asp	Gly	Pro	Pro	Ala	Ala	Asp	Gly	Glu	Asp	Gly	Gln	Asp	Pro	50	55	60	
His	Ser	Lys	His	Leu	Tyr	Thr	Ala	Asp	Met	Phe	Thr	His	Gly	Ile	65	70	75	
Gln	Ser	Ala	Ala	His	Phe	Val	Met	Phe	Phe	Ala	Pro	Trp	Cys	Gly	80	85	90	
His	Cys	Gln	Arg	Leu	Gln	Pro	Thr	Trp	Asn	Asp	Leu	Gly	Asp	Lys	95	100	105	
Tyr	Asn	Ser	Met	Glu	Asp	Ala	Lys	Val	Tyr	Val	Ala	Lys	Val	Asp	110	115	120	
Cys	Thr	Ala	His	Ser	Asp	Val	Cys	Ser	Ala	Gln	Gly	Val	Arg	Gly	125	130	135	
Tyr	Pro	Thr	Leu	Lys	Leu	Phe	Lys	Pro	Gly	Gln	Glu	Ala	Val	Lys	140	145	150	
Tyr	Gln	Gly	Pro	Arg	Asp	Phe	Gln	Thr	Leu	Glu	Asn	Trp	Met	Leu	155	160	165	
Gln	Thr	Leu	Asn	Glu	Glu	Pro	Val	Thr	Pro	Glu	Pro	Glu	Val	Glu	170	175	180	

Pro	Pro	Ser	Ala	Pro	Glu	Leu	Lys	Gln	Gly	Leu	Tyr	Glu	Leu	Ser	185	190	195
Ala	Ser	Asn	Phe	Glu	Leu	His	Val	Ala	Gln	Gly	Asp	His	Phe	Ile	200	205	210
Lys	Phe	Phe	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Ala	Leu	Ala	Pro	215	220	225
Thr	Trp	Glu	Gln	Leu	Ala	Leu	Gly	Leu	Glu	His	Ser	Glu	Thr	Val	230	235	240
Lys	Ile	Gly	Lys	Val	Asp	Cys	Thr	Gln	His	Tyr	Glu	Leu	Cys	Ser	245	250	255
Gly	Asn	Gln	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Trp	Phe	Arg	Asp	260	265	270
Gly	Lys	Lys	Val	Asp	Gln	Tyr	Lys	Gly	Lys	Arg	Asp	Leu	Glu	Ser	275	280	285
Leu	Arg	Glu	Tyr	Val	Glu	Ser	Gln	Leu	Gln	Arg	Thr	Glu	Thr	Gly	290	295	300
Ala	Thr	Glu	Thr	Val	Thr	Pro	Ser	Glu	Ala	Pro	Val	Leu	Ala	Ala	305	310	315
Glu	Pro	Glu	Ala	Asp	Lys	Gly	Thr	Val	Leu	Ala	Leu	Thr	Glu	Asn	320	325	330
Asn	Phe	Asp	Asp	Thr	Ile	Ala	Glu	Gly	Ile	Thr	Phe	Ile	Lys	Phe	335	340	345
Tyr	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Thr	Leu	Ala	Pro	Thr	Trp	350	355	360
Glu	Glu	Leu	Ser	Lys	Lys	Glu	Phe	Pro	Gly	Leu	Ala	Gly	Val	Lys	365	370	375
Ile	Ala	Glu	Val	Asp	Cys	Thr	Ala	Glu	Arg	Asn	Ile	Cys	Ser	Lys	380	385	390
Tyr	Ser	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Leu	Phe	Arg	Gly	Gly	395	400	405
Lys	Lys	Val	Ser	Glu	His	Ser	Gly	Gly	Arg	Asp	Leu	Asp	Ser	Leu	410	415	420
His	Arg	Phe	Val	Leu	Ser	Gln	Ala	Lys	Asp	Glu	Leu				425	430	

<210> 91

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 91  
 atgttcttcg cgccctggtg 20

<210> 92  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 92  
 ccaagccaac acactctaca g 21

<210> 93  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 93  
 aagtggtcgc cttgtgcaac gtgc 24

<210> 94  
 <211> 23  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 94  
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<210> 95  
 <211> 49  
 <212> DNA  
 <213> Artificial Sequence

<220>  
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<400> 95  
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<210> 96  
 <211> 1016  
 <212> DNA  
 <213> Homo sapiens

<400> 96  
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 gtctggatat tgatagccgt cctaccgctg aagtctgtgc cacacacaca 150

atttcaccag gacccaaagg agatgatggt gaaaaaggag atccaggaga 200  
 agaggggaaag catggcaaag tgggacgcat gggggccgaaa ggaattaaag 250  
 gagaactggg tgatatggga gatcagggca atattggcaa gactgggccc 300  
 attgggaaga aggggtgacaa aggggaaaaa ggtttgcttg gaatacctgg 350  
 agaaaaaggc aaagcaggta ctgtctgtga ttgtggaaga taccggaaat 400  
 ttgttggaaca actggatatt agtattgctc ggctcaagac atctatgaag 450  
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 ggattcgggg tggaatgcta gccatgcccaggatgaagc tgccaacaca 600  
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 cagttattgt tatccatcct ttttttctg attgtactac atttgatctg 950  
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 aaaaaaaaaa aaaaaa 1016

<210> 97

<211> 277

<212> PRT

<213> Homo sapiens

<400> 97

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				20				25					30	
Asp	Ser	Arg	Pro	Thr	Ala	Glu	Val	Cys	Ala	Thr	His	Thr	Ile	Ser
				35				40					45	
Pro	Gly	Pro	Lys	Gly	Asp	Asp	Gly	Glu	Lys	Gly	Asp	Pro	Gly	Glu
				50				55					60	
Glu	Gly	Lys	His	Gly	Lys	Val	Gly	Arg	Met	Gly	Pro	Lys	Gly	Ile
				65				70					75	
Lys	Gly	Glu	Leu	Gly	Asp	Met	Gly	Asp	Gln	Gly	Asn	Ile	Gly	Lys



80					85					90				
Thr	Gly	Pro	Ile	Gly	Lys	Lys	Gly	Asp	Lys	Gly	Glu	Lys	Gly	Leu
				95					100					105
Leu	Gly	Ile	Pro	Gly	Glu	Lys	Gly	Lys	Ala	Gly	Thr	Val	Cys	Asp
				110					115					120
Cys	Gly	Arg	Tyr	Arg	Lys	Phe	Val	Gly	Gln	Leu	Asp	Ile	Ser	Ile
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Ala	Arg	Leu	Lys	Thr	Ser	Met	Lys	Phe	Val	Lys	Asn	Val	Ile	Ala
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Glu	Lys	Asn	Tyr	Arg	Glu	Ser	Leu	Thr	His	Cys	Arg	Ile	Arg	Gly
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Gly	Met	Leu	Ala	Met	Pro	Lys	Asp	Glu	Ala	Ala	Asn	Thr	Leu	Ile
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Ala	Asp	Tyr	Val	Ala	Lys	Ser	Gly	Phe	Phe	Arg	Val	Phe	Ile	Gly
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Val	Asn	Asp	Leu	Glu	Arg	Glu	Gly	Gln	Tyr	Met	Ser	Thr	Asp	Asn
				215					220					225
Thr	Pro	Leu	Gln	Asn	Tyr	Ser	Asn	Trp	Asn	Glu	Gly	Glu	Pro	Ser
				230					235					240
Asp	Pro	Tyr	Gly	His	Glu	Asp	Cys	Val	Glu	Met	Leu	Ser	Ser	Gly
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Arg	Trp	Asn	Asp	Thr	Glu	Cys	His	Leu	Thr	Met	Tyr	Phe	Val	Cys
				260					265					270
Glu	Phe	Ile	Lys	Lys	Lys	Lys	Lys							
				275										

<210> 98

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 98

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<210> 99

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 99

gatgatggag gctccataacc tcag 24

<210> 100

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 100

gtgttcattg gcgtgaatga ccttgaaagg gagggacagt acatgttcac 50

<210> 101

<211> 2574

<212> DNA

<213> Homo sapiens

<400> 101

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 aactgcggtc actatcttgt aataaatgtg gctggagctg atccagctgt 2450  
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 actctagagt cgacctgcag tagggataac agggtaataa gcttggccgc 2550  
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 <211> 730  
 <212> PRT  
 <213> Homo sapiens

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 20 25 30  
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 35 40 45  
 Gly Ser Met Ala Ala Leu Leu Leu Leu Pro Leu Leu Leu Leu Leu  
 50 55 60  
 Pro Leu Leu Leu Leu Lys Leu His Leu Trp Pro Gln Leu Arg Trp  
 65 70 75  
 Leu Pro Ala Asp Leu Ala Phe Ala Val Arg Ala Leu Cys Cys Lys  
 80 85 90  
 Arg Ala Leu Arg Ala Arg Ala Leu Ala Ala Ala Ala Asp Pro  
 95 100 105  
 Glu Gly Pro Glu Gly Gly Cys Ser Leu Ala Trp Arg Leu Ala Glu  
 110 115 120  
 Leu Ala Gln Gln Arg Ala Ala His Thr Phe Leu Ile His Gly Ser  
 125 130 135  
 Arg Arg Phe Ser Tyr Ser Glu Ala Glu Arg Glu Ser Asn Arg Ala  
 140 145 150  
 Ala Arg Ala Phe Leu Arg Ala Leu Gly Trp Asp Trp Gly Pro Asp  
 155 160 165  
 Gly Gly Asp Ser Gly Glu Gly Ser Ala Gly Glu Gly Glu Arg Ala  
 170 175 180  
 Ala Pro Gly Ala Gly Asp Ala Ala Ala Gly Ser Gly Ala Glu Phe  
 185 190 195  
 Ala Gly Gly Asp Gly Ala Ala Arg Gly Gly Gly Ala Ala Ala Pro  
 200 205 210

Leu	Ser	Pro	Gly	Ala	Thr	Val	Ala	Leu	Leu	Leu	Pro	Ala	Gly	Pro	215	220	225
Glu	Phe	Leu	Trp	Leu	Trp	Phe	Gly	Leu	Ala	Lys	Ala	Gly	Leu	Arg	230	235	240
Thr	Ala	Phe	Val	Pro	Thr	Ala	Leu	Arg	Arg	Gly	Pro	Leu	Leu	His	245	250	255
Cys	Leu	Arg	Ser	Cys	Gly	Ala	Arg	Ala	Leu	Val	Leu	Ala	Pro	Glu	260	265	270
Phe	Leu	Glu	Ser	Leu	Glu	Pro	Asp	Leu	Pro	Ala	Leu	Arg	Ala	Met	275	280	285
Gly	Leu	His	Leu	Trp	Ala	Ala	Gly	Pro	Gly	Thr	His	Pro	Ala	Gly	290	295	300
Ile	Ser	Asp	Leu	Leu	Ala	Glu	Val	Ser	Ala	Glu	Val	Asp	Gly	Pro	305	310	315
Val	Pro	Gly	Tyr	Leu	Ser	Ser	Pro	Gln	Ser	Ile	Thr	Asp	Thr	Cys	320	325	330
Leu	Tyr	Ile	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Leu	Pro	Lys	Ala	Ala	335	340	345
Arg	Ile	Ser	His	Leu	Lys	Ile	Leu	Gln	Cys	Gln	Gly	Phe	Tyr	Gln	350	355	360
Leu	Cys	Gly	Val	His	Gln	Glu	Asp	Val	Ile	Tyr	Leu	Ala	Leu	Pro	365	370	375
Leu	Tyr	His	Met	Ser	Gly	Ser	Leu	Leu	Gly	Ile	Val	Gly	Cys	Met	380	385	390
Gly	Ile	Gly	Ala	Thr	Val	Val	Leu	Lys	Ser	Lys	Phe	Ser	Ala	Gly	395	400	405
Gln	Phe	Trp	Glu	Asp	Cys	Gln	Gln	His	Arg	Val	Thr	Val	Phe	Gln	410	415	420
Tyr	Ile	Gly	Glu	Leu	Cys	Arg	Tyr	Leu	Val	Asn	Gln	Pro	Pro	Ser	425	430	435
Lys	Ala	Glu	Arg	Gly	His	Lys	Val	Arg	Leu	Ala	Val	Gly	Ser	Gly	440	445	450
Leu	Arg	Pro	Asp	Thr	Trp	Glu	Arg	Phe	Val	Arg	Arg	Phe	Gly	Pro	455	460	465
Leu	Gln	Val	Leu	Glu	Thr	Tyr	Gly	Leu	Thr	Glu	Gly	Asn	Val	Ala	470	475	480
Thr	Ile	Asn	Tyr	Thr	Gly	Gln	Arg	Gly	Ala	Val	Gly	Arg	Ala	Ser	485	490	495
Trp	Leu	Tyr	Lys	His	Ile	Phe	Pro	Phe	Ser	Leu	Ile	Arg	Tyr	Asp			

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Val Thr Thr Gly Glu Pro Ile Arg Asp 515	Pro Gln Gly His Cys Met 520	Met 525
Ala Thr Ser Pro Gly Glu Pro Gly Leu 530	Leu Val Ala Pro Val Ser 535	Ser 540
Gln Gln Ser Pro Phe Leu Gly Tyr Ala 545	Gly Gly Pro Glu Leu Ala 550	Ala 555
Gln Gly Lys Leu Leu Lys Asp Val Phe 560	Arg Pro Gly Asp Val Phe 565	Phe 570
Phe Asn Thr Gly Asp Leu Leu Val Cys 575	Asp Asp Gln Gly Phe Leu 580	Leu 585
Arg Phe His Asp Arg Thr Gly Asp Thr 590	Phe Arg Trp Lys Gly Glu 595	Glu 600
Asn Val Ala Thr Thr Glu Val Ala Glu 605	Val Phe Glu Ala Leu Asp 610	Asp 615
Phe Leu Gln Glu Val Asn Val Tyr Gly 620	Val Thr Val Pro Gly His 625	His 630
Glu Gly Arg Ala Gly Met Ala Ala Leu 635	Val Leu Arg Pro Pro His 640	His 645
Ala Leu Asp Leu Met Gln Leu Tyr Thr 650	His Val Ser Glu Asn Leu 655	Leu 660
Pro Pro Tyr Ala Arg Pro Arg Phe Leu 665	Arg Leu Gln Glu Ser Leu 670	Leu 675
Ala Thr Thr Glu Thr Phe Lys Gln Gln 680	Lys Val Arg Met Ala Asn 685	Asn 690
Glu Gly Phe Asp Pro Ser Thr Leu Ser 695	Asp Pro Leu Tyr Val Leu 700	Leu 705
Asp Gln Ala Val Gly Ala Tyr Leu Pro 710	Leu Thr Thr Ala Arg Tyr 715	Tyr 720
Ser Ala Leu Leu Ala Gly Asn Leu Arg 725	Ile 730	

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<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

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 <211> 555  
 <212> PRT  
 <213> Homo sapiens

<400> 109  
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 Gly Glu Val Arg Gln Ala Tyr Gly Ala Lys Gly Phe Ser Leu Ala  
 35 40 45  
 Asp Ile Pro Tyr Gln Glu Ile Ala Gly Glu His Leu Arg Ile Cys  
 50 55 60  
 Pro Gln Glu Tyr Thr Cys Cys Thr Thr Glu Met Glu Asp Lys Leu  
 65 70 75

Ser	Gln	Gln	Ser	Lys	Leu	Glu	Phe	Glu	Asn	Leu	Val	Glu	Glu	Thr	80	85	90
Ser	His	Phe	Val	Arg	Thr	Thr	Phe	Val	Ser	Arg	His	Lys	Lys	Phe	95	100	105
Asp	Glu	Phe	Phe	Arg	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	110	115	120
Asn	Asp	Met	Phe	Val	Arg	Thr	Tyr	Gly	Met	Leu	Tyr	Met	Gln	Asn	125	130	135
Ser	Glu	Val	Phe	Gln	Asp	Leu	Phe	Thr	Glu	Leu	Lys	Arg	Tyr	Tyr	140	145	150
Thr	Gly	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp	155	160	165
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Gln	Leu	Ile	Asn	Pro	Gln	Tyr	170	175	180
His	Phe	Ser	Glu	Asp	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Asp	185	190	195
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Ile	Gln	200	205	210
Val	Thr	Arg	Ala	Phe	Ile	Ala	Ala	Arg	Thr	Phe	Val	Gln	Gly	Leu	215	220	225
Thr	Val	Gly	Arg	Glu	Val	Ala	Asn	Arg	Val	Ser	Lys	Val	Ser	Pro	230	235	240
Thr	Pro	Gly	Cys	Ile	Arg	Ala	Leu	Met	Lys	Met	Leu	Tyr	Cys	Pro	245	250	255
Tyr	Cys	Arg	Gly	Leu	Pro	Thr	Val	Arg	Pro	Cys	Asn	Asn	Tyr	Cys	260	265	270
Leu	Asn	Val	Met	Lys	Gly	Cys	Leu	Ala	Asn	Gln	Ala	Asp	Leu	Asp	275	280	285
Thr	Glu	Trp	Asn	Leu	Phe	Ile	Asp	Ala	Met	Leu	Leu	Val	Ala	Glu	290	295	300
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile	305	310	315
Asp	Val	Lys	Ile	Ser	Glu	Ala	Ile	Met	Asn	Met	Gln	Glu	Asn	Ser	320	325	330
Met	Gln	Val	Ser	Ala	Lys	Val	Phe	Gln	Gly	Cys	Gly	Gln	Pro	Lys	335	340	345
Pro	Ala	Pro	Ala	Leu	Arg	Ser	Ala	Arg	Ser	Ala	Pro	Glu	Asn	Phe	350	355	360
Asn	Thr	Arg	Phe	Arg	Pro	Tyr	Asn	Pro	Glu	Glu	Arg	Pro	Thr	Thr			

365					370					375				
Ala	Ala	Gly	Thr	Ser	Leu	Asp	Arg	Leu	Val	Thr	Asp	Ile	Lys	Glu
				380					385					390
Lys	Leu	Lys	Leu	Ser	Lys	Lys	Val	Trp	Ser	Ala	Leu	Pro	Tyr	Thr
				395					400					405
Ile	Cys	Lys	Asp	Glu	Ser	Val	Thr	Ala	Gly	Thr	Ser	Asn	Glu	Glu
				410					415					420
Glu	Cys	Trp	Asn	Gly	His	Ser	Lys	Ala	Arg	Tyr	Leu	Pro	Glu	Ile
				425					430					435
Met	Asn	Asp	Gly	Leu	Thr	Asn	Gln	Ile	Asn	Asn	Pro	Glu	Val	Asp
				440					445					450
Val	Asp	Ile	Thr	Arg	Pro	Asp	Thr	Phe	Ile	Arg	Gln	Gln	Ile	Met
				455					460					465
Ala	Leu	Arg	Val	Met	Thr	Asn	Lys	Leu	Lys	Asn	Ala	Tyr	Asn	Gly
				470					475					480
Asn	Asp	Val	Asn	Phe	Gln	Asp	Thr	Ser	Asp	Glu	Ser	Ser	Gly	Ser
				485					490					495
Gly	Ser	Gly	Ser	Gly	Cys	Met	Asp	Asp	Val	Cys	Pro	Thr	Glu	Phe
				500					505					510
Glu	Phe	Val	Thr	Thr	Glu	Ala	Pro	Ala	Val	Asp	Pro	Asp	Arg	Arg
				515					520					525
Glu	Val	Asp	Ser	Ser	Ala	Ala	Gln	Arg	Gly	His	Ser	Leu	Leu	Ser
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Trp	Ser	Leu	Thr	Cys	Ile	Val	Leu	Ala	Leu	Gln	Arg	Leu	Cys	Arg
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 <223> Synthetic oligonucleotide probe

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<210> 111  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 111

tgcacagtct ctgcagtgcc cagg 24

<210> 112

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 112

gaatgctgga acgggcacag caaagccaga tacttgctg 40

<210> 113

<211> 4649

<212> DNA

<213> Homo sapiens

<400> 113

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cgccaactac gcaaagacca agcgggctcc gcgcggaccg gccgcggggc 150

tagggacccg gctttggcct tcaggctccc tagcagcggg gaaaaggaat 200

tgctgcccgg agtttctgcy gaggtggagg gagatcagga aacggcttct 250

tctcacttc gccgcctggt gagtgtcggg gagattggca aacgcctagg 300

aaaggactgg ggaaaatagc cctgggaaag tggagaaggt gatcaggagg 350

ccggtccact acggcagttt atctgtctga tcagagccag acgcgacgcg 400

tccacttcgc agttctttcc aggtgtgggg accgcaggac agacggccga 450

tcccgcgcgc ctccgtacca gcactcccag gagagtcagc ctgcctcccc 500

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Trp Gly Gln Ala Leu Glu Glu Glu Glu Glu Gly Ala Leu Leu Ala  
 50 55 60  
 Gln Ala Gly Glu Lys Leu Glu Pro Ser Thr Thr Ser Thr Ser Gln  
 65 70 75  
 Pro His Leu Ile Phe Ile Leu Ala Asp Asp Gln Gly Phe Arg Asp  
 80 85 90  
 Val Gly Tyr His Gly Ser Glu Ile Lys Thr Pro Thr Leu Asp Lys  
 95 100 105  
 Leu Ala Ala Glu Gly Val Lys Leu Glu Asn Tyr Tyr Val Gln Pro

Ile Cys Thr Pro Ser Arg Ser Gln Phe	Ile Thr Gly Lys Tyr Gln
110 125	115 130 135
Ile His Thr Gly Leu Gln His Ser Ile	Ile Arg Pro Thr Gln Pro
140	145 150
Asn Cys Leu Pro Leu Asp Asn Ala Thr	Leu Pro Gln Lys Leu Lys
155	160 165
Glu Val Gly Tyr Ser Thr His Met Val	Gly Lys Trp His Leu Gly
170	175 180
Phe Asn Arg Lys Glu Cys Met Pro Thr	Arg Arg Gly Phe Asp Thr
185	190 195
Phe Phe Gly Ser Leu Leu Gly Ser Gly	Asp Tyr Tyr Thr His Tyr
200	205 210
Lys Cys Asp Ser Pro Gly Met Cys Gly	Tyr Asp Leu Tyr Glu Asn
215	220 225
Asp Asn Ala Ala Trp Asp Tyr Asp Asn	Gly Ile Tyr Ser Thr Gln
230	235 240
Met Tyr Thr Gln Arg Val Gln Gln Ile	Leu Ala Ser His Asn Pro
245	250 255
Thr Lys Pro Ile Phe Leu Tyr Thr Ala	Tyr Gln Ala Val His Ser
260	265 270
Pro Leu Gln Ala Pro Gly Arg Tyr Phe	Glu His Tyr Arg Ser Ile
275	280 285
Ile Asn Ile Asn Arg Arg Arg Tyr Ala	Ala Met Leu Ser Cys Leu
290	295 300
Asp Glu Ala Ile Asn Asn Val Thr Leu	Ala Leu Lys Thr Tyr Gly
305	310 315
Phe Tyr Asn Asn Ser Ile Ile Ile Tyr	Ser Ser Asp Asn Gly Gly
320	325 330
Gln Pro Thr Ala Gly Gly Ser Asn Trp	Pro Leu Arg Gly Ser Lys
335	340 345
Gly Thr Tyr Trp Glu Gly Gly Ile Arg	Ala Val Gly Phe Val His
350	355 360
Ser Pro Leu Leu Lys Asn Lys Gly Thr	Val Cys Lys Glu Leu Val
365	370 375
His Ile Thr Asp Trp Tyr Pro Thr Leu	Ile Ser Leu Ala Glu Gly
380	385 390
Gln Ile Asp Glu Asp Ile Gln Leu Asp	Gly Tyr Asp Ile Trp Glu
395	400 405



Thr	Ile	Ser	Glu	Gly	Leu	Arg	Ser	Pro	Arg	Val	Asp	Ile	Leu	His
				410					415					420
Asn	Ile	Asp	Pro	Tyr	Thr	Pro	Arg	Gln	Lys	Met	Ala	Pro	Gly	Gln
				425					430					435
Gln	Ala	Met	Gly	Ser	Gly	Thr	Leu	Gln	Ser	Ser	Gln	Pro	Ser	Glu
				440					445					450
Cys	Ser	Thr	Gly	Asn	Cys	Leu	Gln	Glu	Ile	Leu	Ala	Thr	Ala	Thr
				455					460					465
Gly	Ser	Pro	Leu	Ser	Leu	Ser	Ala	Thr	Trp	Asp	Arg	Thr	Gly	Gly
				470					475					480
Thr	Met	Asn	Gly	Ser	Pro	Cys	Gln	Leu	Ala	Lys	Val	Tyr	Gly	Phe
				485					490					495
Ser	Thr	Ser	Gln	Pro	Thr	His	Met	Arg	Gly	Trp	Thr	Tyr	Leu	Thr
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Gly	Ile	Gln	Glu	Ser										
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<220>  
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<210> 116  
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<220>  
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<400> 116  
 ctctctgagt gtacatctgt gtgg 24

<210> 117  
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<220>  
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<220>  
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 <223> unknown base

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cgg 53

<210> 118  
<211> 2260  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2009, 2026, 2033, 2055, 2074, 2078, 2086  
<223> unknown base

<400> 118  
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aacacagatg tgtgaataca cacggaagct acaagtgctt ttgcctcagt 500  
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<211> 338

<212> PRT

<213> Homo sapiens

<400> 119

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				20					25					30	
Leu	Leu	Ala	Ser	Ala	Arg	Gln	Pro	Gly	Val	Cys	His	Tyr	Gly	Thr	
				35					40					45	
Lys	Leu	Ala	Cys	Cys	Tyr	Gly	Trp	Arg	Arg	Asn	Ser	Lys	Gly	Val	
				50					55					60	
Cys	Glu	Ala	Thr	Cys	Glu	Pro	Gly	Cys	Lys	Phe	Gly	Glu	Cys	Val	
				65					70					75	
Gly	Pro	Asn	Lys	Cys	Arg	Cys	Phe	Pro	Gly	Tyr	Thr	Gly	Lys	Thr	
				80					85					90	
Cys	Ser	Gln	Asp	Val	Asn	Glu	Cys	Gly	Met	Lys	Pro	Arg	Pro	Cys	
				95					100					105	
Gln	His	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Tyr	Lys	Cys	Phe	Cys	
				110					115					120	
Leu	Ser	Gly	His	Met	Leu	Met	Pro	Asp	Ala	Thr	Cys	Val	Asn	Ser	
				125					130					135	
Arg	Thr	Cys	Ala	Met	Ile	Asn	Cys	Gln	Tyr	Ser	Cys	Glu	Asp	Thr	
				140					145					150	
Glu	Glu	Gly	Pro	Gln	Cys	Leu	Cys	Pro	Ser	Ser	Gly	Leu	Arg	Leu	
				155					160					165	
Ala	Pro	Asn	Gly	Arg	Asp	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Ala	Ser	
				170					175					180	
Gly	Lys	Val	Ile	Cys	Pro	Tyr	Asn	Arg	Arg	Cys	Val	Asn	Thr	Phe	
				185					190					195	
Gly	Ser	Tyr	Tyr	Cys	Lys	Cys	His	Ile	Gly	Phe	Glu	Leu	Gln	Tyr	
				200					205					210	
Ile	Ser	Gly	Arg	Tyr	Asp	Cys	Ile	Asp	Ile	Asn	Glu	Cys	Thr	Met	
				215					220					225	
Asp	Ser	His	Thr	Cys	Ser	His	His	Ala	Asn	Cys	Phe	Asn	Thr	Gln	
				230					235					240	
Gly	Ser	Phe	Lys	Cys	Lys	Cys	Lys	Gln	Gly	Tyr	Lys	Gly	Asn	Gly	
				245					250					255	
Leu	Arg	Cys	Ser	Ala	Ile	Pro	Glu	Asn	Ser	Val	Lys	Glu	Val	Leu	
				260					265					270	
Arg	Ala	Pro	Gly	Thr	Ile	Lys	Asp	Arg	Ile	Lys	Lys	Leu	Leu	Ala	
				275					280					285	
His	Lys	Asn	Ser	Met	Lys	Lys	Lys	Ala	Lys	Ile	Lys	Asn	Val	Thr	
				290					295					300	
Pro	Glu	Pro	Thr	Arg	Thr	Pro	Thr	Pro	Lys	Val	Asn	Leu	Gln	Pro	

305

310

315

Phe Asn Tyr Glu Glu Ile Val Ser Arg Gly Gly Asn Ser His Gly  
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Gly Lys Lys Gly Asn Glu Glu Lys  
 335

&lt;210&gt; 120

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 120

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&lt;210&gt; 121

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 121

ggctgcacgt atggctatcc atag 24

&lt;210&gt; 122

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 122

gataaactgt cagtacagct gtgaagacac agaagaagg ccacagtgcc 50

&lt;210&gt; 123

&lt;211&gt; 1199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 123

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gtgcagctgc tgcgcttcct gagggtgac ggcgacctga cgctactatg 100

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<211> 289

<212> PRT

<213> Homo sapiens

<400> 124

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			20						25					30
Ala	Arg	Arg	Val	His	Glu	Leu	Glu	Arg	Val	Lys	Arg	Arg	Cys	Leu
			35						40					45
Glu	Asn	Gly	Asn	Leu	Lys	Glu	Lys	Asp	Ile	Leu	Val	Leu	Pro	Leu
			50						55					60
Asp	Leu	Thr	Asp	Thr	Gly	Ser	His	Glu	Ala	Ala	Thr	Lys	Ala	Val
			65						70					75
Leu	Gln	Glu	Phe	Gly	Arg	Ile	Asp	Ile	Leu	Val	Asn	Asn	Gly	Gly

80										85					90				
Met	Ser	Gln	Arg	Ser	Leu	Cys	Met	Asp	Thr	Ser	Leu	Asp	Val	Tyr					
				95					100					105					
Arg	Lys	Leu	Ile	Glu	Leu	Asn	Tyr	Leu	Gly	Thr	Val	Ser	Leu	Thr					
				110					115					120					
Lys	Cys	Val	Leu	Pro	His	Met	Ile	Glu	Arg	Lys	Gln	Gly	Lys	Ile					
				125					130					135					
Val	Thr	Val	Asn	Ser	Ile	Leu	Gly	Ile	Ile	Ser	Val	Pro	Leu	Ser					
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Ile	Gly	Tyr	Cys	Ala	Ser	Lys	His	Ala	Leu	Arg	Gly	Phe	Phe	Asn					
				155					160					165					
Gly	Leu	Arg	Thr	Glu	Leu	Ala	Thr	Tyr	Pro	Gly	Ile	Ile	Val	Ser					
				170					175					180					
Asn	Ile	Cys	Pro	Gly	Pro	Val	Gln	Ser	Asn	Ile	Val	Glu	Asn	Ser					
				185					190					195					
Leu	Ala	Gly	Glu	Val	Thr	Lys	Thr	Ile	Gly	Asn	Asn	Gly	Asp	Gln					
				200					205					210					
Ser	His	Lys	Met	Thr	Thr	Ser	Arg	Cys	Val	Arg	Leu	Met	Leu	Ile					
				215					220					225					
Ser	Met	Ala	Asn	Asp	Leu	Lys	Glu	Val	Trp	Ile	Ser	Glu	Gln	Pro					
				230					235					240					
Phe	Leu	Leu	Val	Thr	Tyr	Leu	Trp	Gln	Tyr	Met	Pro	Thr	Trp	Ala					
				245					250					255					
Trp	Trp	Ile	Thr	Asn	Lys	Met	Gly	Lys	Lys	Arg	Ile	Glu	Asn	Phe					
				260					265					270					
Lys	Ser	Gly	Val	Asp	Ala	Asp	Ser	Ser	Tyr	Phe	Lys	Ile	Phe	Lys					
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Thr Lys His Asp

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 <213> Artificial Sequence

<220>  
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<400> 125  
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<210> 126  
 <211> 19  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ctgtgaatag catcctggg 19

<210> 127

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

cttttcaagc cactggaggg 20

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 128

ctgtagacat ccaagctggg atcc 24

<210> 129

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 129

aagagtctgc atccacacca ctc 23

<210> 130

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 130

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<210> 131

<211> 2365

<212> DNA

<213> Homo sapiens

<400> 131



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 <211> 571  
 <212> PRT  
 <213> Homo sapiens

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 Ile Thr Thr Tyr Ala Ile Asn Val Ser Leu Met Trp Leu Ser Phe  
 35 40 45  
 Arg Lys Val Gln Glu Pro Gln Gly Lys Ala Lys Arg His Gly Asn  
 50 55 60  
 Thr Val Pro Gly Glu Trp Pro Trp Gln Ala Ser Val Arg Arg Gln  
 65 70 75

Gly	Ala	His	Ile	Cys	Ser	Gly	Ser	Leu	Val	Ala	Asp	Thr	Trp	Val	
				80					85					90	
Leu	Thr	Ala	Ala	His	Cys	Phe	Glu	Lys	Ala	Ala	Ala	Thr	Glu	Leu	
				95					100					105	
Asn	Ser	Trp	Ser	Val	Val	Leu	Gly	Ser	Leu	Gln	Arg	Glu	Gly	Leu	
				110					115					120	
Ser	Pro	Gly	Ala	Glu	Glu	Val	Gly	Val	Ala	Ala	Leu	Gln	Leu	Pro	
				125					130					135	
Arg	Ala	Tyr	Asn	His	Tyr	Ser	Gln	Gly	Ser	Asp	Leu	Ala	Leu	Leu	
				140					145					150	
Gln	Leu	Ala	His	Pro	Thr	Thr	His	Thr	Pro	Leu	Cys	Leu	Pro	Gln	
				155					160					165	
Pro	Ala	His	Arg	Phe	Pro	Phe	Gly	Ala	Ser	Cys	Trp	Ala	Thr	Gly	
				170					175					180	
Trp	Asp	Gln	Asp	Thr	Ser	Asp	Ala	Pro	Gly	Thr	Leu	Arg	Asn	Leu	
				185					190					195	
Arg	Leu	Arg	Leu	Ile	Ser	Arg	Pro	Thr	Cys	Asn	Cys	Ile	Tyr	Asn	
				200					205					210	
Gln	Leu	His	Gln	Arg	His	Leu	Ser	Asn	Pro	Ala	Arg	Pro	Gly	Met	
				215					220					225	
Leu	Cys	Gly	Gly	Pro	Gln	Pro	Gly	Val	Gln	Gly	Pro	Cys	Gln	Gly	
				230					235					240	
Asp	Ser	Gly	Gly	Pro	Val	Leu	Cys	Leu	Glu	Pro	Asp	Gly	His	Trp	
				245					250					255	
Val	Gln	Ala	Gly	Ile	Ile	Ser	Phe	Ala	Ser	Ser	Cys	Ala	Gln	Glu	
				260					265					270	
Asp	Ala	Pro	Val	Leu	Leu	Thr	Asn	Thr	Ala	Ala	His	Ser	Ser	Trp	
				275					280					285	
Leu	Gln	Ala	Arg	Val	Gln	Gly	Ala	Ala	Phe	Leu	Ala	Gln	Ser	Pro	
				290					295					300	
Glu	Thr	Pro	Glu	Met	Ser	Asp	Glu	Asp	Ser	Cys	Val	Ala	Cys	Gly	
				305					310					315	
Ser	Leu	Arg	Thr	Ala	Gly	Pro	Gln	Ala	Gly	Ala	Pro	Ser	Pro	Trp	
				320					325					330	
Pro	Trp	Glu	Ala	Arg	Leu	Met	His	Gln	Gly	Gln	Leu	Ala	Cys	Gly	
				335					340					345	
Gly	Ala	Leu	Val	Ser	Glu	Glu	Ala	Val	Leu	Thr	Ala	Ala	His	Cys	
				350					355					360	
Phe	Ile	Gly	Arg	Gln	Ala	Pro	Glu	Glu	Trp	Ser	Val	Gly	Leu	Gly	

365	370	375
Thr Arg Pro Glu Glu Trp Gly Leu Lys	Gln Leu Ile Leu His Gly	
380	385	390
Ala Tyr Thr His Pro Glu Gly Gly Tyr	Asp Met Ala Leu Leu Leu	
395	400	405
Leu Ala Gln Pro Val Thr Leu Gly Ala	Ser Leu Arg Pro Leu Cys	
410	415	420
Leu Pro Tyr Pro Asp His His Leu Pro	Asp Gly Glu Arg Gly Trp	
425	430	435
Val Leu Gly Arg Ala Arg Pro Gly Ala	Gly Ile Ser Ser Leu Gln	
440	445	450
Thr Val Pro Val Thr Leu Leu Gly Pro	Arg Ala Cys Ser Arg Leu	
455	460	465
His Ala Ala Pro Gly Gly Asp Gly Ser	Pro Ile Leu Pro Gly Met	
470	475	480
Val Cys Thr Ser Ala Val Gly Glu Leu	Pro Ser Cys Glu Gly Leu	
485	490	495
Ser Gly Ala Pro Leu Val His Glu Val	Arg Gly Thr Trp Phe Leu	
500	505	510
Ala Gly Leu His Ser Phe Gly Asp Ala	Cys Gln Gly Pro Ala Arg	
515	520	525
Pro Ala Val Phe Thr Ala Leu Pro Ala	Tyr Glu Asp Trp Val Ser	
530	535	540
Ser Leu Asp Trp Gln Val Tyr Phe Ala	Glu Glu Pro Glu Pro Glu	
545	550	555
Ala Glu Pro Gly Ser Cys Leu Ala Asn	Ile Ser Gln Pro Thr Ser	
560	565	570

Cys

<210> 133  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 133  
 cctgtgctgt gcctcgagcc tgac 24

<210> 134  
 <211> 24  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 134

gtgggcagca gttagcaccg cctc 24

<210> 135

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 135

ggctggcatc atcagctttg catcaagctg tgcccaggag gacgc 45

<210> 136

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 136

cgggccgccc cgggccccca ttcgggccgg gcctcgctgc ggcggcgact 50

gagccaggct gggccgcgtc cctgagtcac agagtcggcg cggcgcgaggca 100

ggggcagcct tccaccacgg ggagcccagc tgtcagccgc ctcacaggaa 150

gatgctgcgt cggcgggggca gccctggcat ggggtgtgcat gtgggtgcag 200

ccctgggagc actgtggttc tgccctacag gagccctgga ggtccaggtc 250

cctgaagacc cagtgggtggc actggtgggc accgatgcc aacctgtgctg 300

ctccttctcc cctgagcctg gcttcagcct ggcacagctc aacctcatct 350

ggcagctgac agatacaaaa cagctggtgc acagctttgc tgaggggccag 400

gaccagggca ggcctatgc caaccgcacg gccctcttcc cggacctgct 450

ggcacagggc aacgcattcc tgaggctgca ggcgctgcgt gtggcggacg 500

agggcagctt cacctgcttc gtgagcatcc gggatttcgg cagcgctgcc 550

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gccaacaag gacctgcggc caggggacac ggtgaccatc acgtgctcca 650

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 atgccttccg gatgtcatct ctccctgccc caggaatgga agatgtgagg 1900  
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<210> 137

<211> 316

<212> PRT

<213> Homo sapiens

<220>

<221> unsure

<222> 233

<223> unknown amino acid

<400> 137

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Val Gln Val Pro	Glu Asp Pro Val Val	Ala Leu Val Gly Thr	Asp
	35	40	45
Ala Thr Leu Cys	Cys Ser Phe Ser Pro	Glu Pro Gly Phe Ser	Leu
	50	55	60
Ala Gln Leu Asn	Leu Ile Trp Gln Leu	Thr Asp Thr Lys Gln	Leu
	65	70	75
Val His Ser Phe	Ala Glu Gly Gln Asp	Gln Gly Ser Ala Tyr	Ala
	80	85	90
Asn Arg Thr Ala	Leu Phe Pro Asp Leu	Leu Ala Gln Gly Asn	Ala
	95	100	105
Ser Leu Arg Leu	Gln Arg Val Arg Val	Ala Asp Glu Gly Ser	Phe
	110	115	120
Thr Cys Phe Val	Ser Ile Arg Asp Phe	Gly Ser Ala Ala Val	Ser
	125	130	135
Leu Gln Val Ala	Ala Pro Tyr Ser Lys	Pro Ser Met Thr Leu	Glu
	140	145	150
Pro Asn Lys Asp	Leu Arg Pro Gly Asp	Thr Val Thr Ile Thr	Cys
	155	160	165
Ser Ser Tyr Gln	Gly Tyr Pro Glu Ala	Glu Val Phe Trp Gln	Asp
	170	175	180
Gly Gln Gly Val	Pro Leu Thr Gly Asn	Val Thr Thr Ser Gln	Met
	185	190	195
Ala Asn Glu Gln	Gly Leu Phe Asp Val	His Ser Val Leu Arg	Val
	200	205	210
Val Leu Gly Ala	Asn Gly Thr Tyr Ser	Cys Leu Val Arg Asn	Pro
	215	220	225
Val Leu Gln Gln	Asp Ala His Xaa Ser	Val Thr Ile Thr Gly	Gln
	230	235	240
Pro Met Thr Phe	Pro Pro Glu Ala Leu	Trp Val Thr Val Gly	Leu
	245	250	255
Ser Val Cys Leu	Ile Ala Leu Leu Val	Ala Leu Ala Phe Val	Cys
	260	265	270
Trp Arg Lys Ile	Lys Gln Ser Cys Glu	Glu Glu Asn Ala Gly	Ala
	275	280	285
Glu Asp Gln Asp	Gly Glu Gly Glu Gly	Ser Lys Thr Ala Leu	Gln
	290	295	300

Pro Leu Lys His Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile  
305 310 315

Ala

<210> 138

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 138

ctggcacagc tcaacctcat ctgg 24

<210> 139

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 139

gctgtctgtc tgtctcattg 20

<210> 140

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 140

ggacacagta tactgaccac 20

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

tgcgaaccag gcagctgtaa gtgc 24

<210> 142

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 142  
tggaagaaga gggtagtgat gtgg 24

<210> 143  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 143  
cagctgacag acaccaaaca gctgggtgcac agtttcaccg aaggc 45

<210> 144  
<211> 2336  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 1620, 1673  
<223> unknown base

<400> 144  
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gaagggggag tcctgaactt gtctgaagcc cttgtccgta agccttgaac 100  
tacgttctta aatctatgaa gtcgagggac ctttcgctgc ttttgtaggg 150  
acttctttcc ttgcttcagc aacatgagggc ttttcttgtg gaacgcgggc 200  
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agtgaaaatt gaagttctcc agaagccatt catctgccat cgcaagacca 300  
aaggagggga tttgatgttg gtccactatg aaggctactt agaaaaggac 350  
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gtttaccctg ggcatcctgg aggcctctca aggttggggac cagggcttga 450  
aaggaatgtg tgtaggagag aagagaaagc tcatcattcc tcctgctctg 500  
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tgaaagtcac catgatgctt tggtaggagga tatTTTTgat aaagaagatg 750  
aagacaaaga tgggtttata tctgccagag aatttacata taaacacgat 800  
gagttataga gatacatcta cccttttaat atagcactca tctttcaaga 850

gagggcagtc atcttttaaag aacattttat ttttatacaa tggtctttct 900  
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cccttagggt tctaagtacc catttcttct tgataagtta ttgggaagaa 1000  
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acagatatga agctttgttt tactttctca cttataaatt taaaatgttg 1100  
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aggcggaggt tgcagtgagc caagattgtg ccactgcact ccagcctggg 2250  
tgacagagca agactccatc tcaaaaaaaa aaaaaagaag cagacctaca 2300

gcagctacta ttgaataaat acctatcctg gatttt 2336

<210> 145

<211> 211

<212> PRT

<213> Homo sapiens

<400> 145

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Ser	Leu	Ile	Gly	Ala	Leu	Ile	Pro	Glu	Pro	Glu	Val	Lys	Ile	Glu
			20						25					30

Val	Leu	Gln	Lys	Pro	Phe	Ile	Cys	His	Arg	Lys	Thr	Lys	Gly	Gly
			35						40					45

Asp	Leu	Met	Leu	Val	His	Tyr	Glu	Gly	Tyr	Leu	Glu	Lys	Asp	Gly
			50						55					60

Ser	Leu	Phe	His	Ser	Thr	His	Lys	His	Asn	Asn	Gly	Gln	Pro	Ile
			65						70					75

Trp	Phe	Thr	Leu	Gly	Ile	Leu	Glu	Ala	Leu	Lys	Gly	Trp	Asp	Gln
			80						85					90

Gly	Leu	Lys	Gly	Met	Cys	Val	Gly	Glu	Lys	Arg	Lys	Leu	Ile	Ile
			95						100					105

Pro	Pro	Ala	Leu	Gly	Tyr	Gly	Lys	Glu	Gly	Lys	Gly	Lys	Ile	Pro
			110						115					120

Pro	Glu	Ser	Thr	Leu	Ile	Phe	Asn	Ile	Asp	Leu	Leu	Glu	Ile	Arg
			125						130					135

Asn	Gly	Pro	Arg	Ser	His	Glu	Ser	Phe	Gln	Glu	Met	Asp	Leu	Asn
			140						145					150

Asp	Asp	Trp	Lys	Leu	Ser	Lys	Asp	Glu	Val	Lys	Ala	Tyr	Leu	Lys
			155						160					165

Lys	Glu	Phe	Glu	Lys	His	Gly	Ala	Val	Val	Asn	Glu	Ser	His	His
			170						175					180

Asp	Ala	Leu	Val	Glu	Asp	Ile	Phe	Asp	Lys	Glu	Asp	Glu	Asp	Lys
			185						190					195

Asp	Gly	Phe	Ile	Ser	Ala	Arg	Glu	Phe	Thr	Tyr	Lys	His	Asp	Glu
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Leu

<210> 146

<211> 26

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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<210> 147  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 147  
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<210> 148  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 148  
gtggaacgcg gtcttgactc tgttcgtcac ttctttgatt ggggctttg 49

<210> 149  
<211> 2196  
<212> DNA  
<213> Homo sapiens

<400> 149  
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caccctctcc cgtagccac ccgactaaca tctcagtcgc tgaaaatgca 150  
cagagatgcc tggctacctc gccctgcctt cagcctcacg gggctcagtc 200  
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cggtgtgctg taatcccagc tatttgggag gctgaggcag gagaatcgct 2100  
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 tgcaattcag cctgggtgac atagagagac tccatctcaa aaaaaa 2196

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 <211> 215  
 <212> PRT  
 <213> Homo sapiens

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 Glu Val Thr Val Pro Ala Thr Leu Asn Val Leu Asn Gly Ser Asp  
 35 40 45  
 Ala Arg Leu Pro Cys Thr Phe Asn Ser Cys Tyr Thr Val Asn His  
 50 55 60  
 Lys Gln Phe Ser Leu Asn Trp Thr Tyr Gln Glu Cys Asn Asn Cys  
 65 70 75  
 Ser Glu Glu Met Phe Leu Gln Phe Arg Met Lys Ile Ile Asn Leu  
 80 85 90  
 Lys Leu Glu Arg Phe Gln Asp Arg Val Glu Phe Ser Gly Asn Pro  
 95 100 105  
 Ser Lys Tyr Asp Val Ser Val Met Leu Arg Asn Val Gln Pro Glu  
 110 115 120  
 Asp Glu Gly Ile Tyr Asn Cys Tyr Ile Met Asn Pro Pro Asp Arg  
 125 130 135  
 His Arg Gly His Gly Lys Ile His Leu Gln Val Leu Met Glu Glu  
 140 145 150  
 Pro Pro Glu Arg Asp Ser Thr Val Ala Val Ile Val Gly Ala Ser  
 155 160 165  
 Val Gly Gly Phe Leu Ala Val Val Ile Leu Val Leu Met Val Val  
 170 175 180  
 Lys Cys Val Arg Arg Lys Lys Glu Gln Lys Leu Ser Thr Asp Asp  
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 Leu Lys Thr Glu Glu Glu Gly Lys Thr Asp Gly Glu Gly Asn Pro  
 200 205 210  
 Asp Asp Gly Ala Lys  
 215

<210> 151

<211> 524  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 103, 233  
<223> unknown base

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ccaggacgga gcatggaggt ccacagtacc tgnccaccct caacgtcctc 250  
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<210> 152  
<211> 368  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 56, 123  
<223> unknown base

<400> 152  
tcacggggct catctctttt tctctttggt gccaccagg acggagcatg 50  
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ccctgaactg gatttaccag gagtgaaca actggctctg aggagatgtt 200  
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ctacatcatg aaccccc 368

<210> 153  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 153  
acggagcatg gaggtccaca gtac 24

<210> 154  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 154  
gcacgtttct cagcatcacc gac 23

<210> 155  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 155  
cgctgcct gcaccttcaa ctctgtctac acagtgaacc acaaacagtt 50

<210> 156  
<211> 2680  
<212> DNA  
<213> Homo sapiens

<400> 156  
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cgcggaacca gcgctcccg cggagctca cccccagtg gtgctggctc 150  
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<210> 157

<211> 412

<212> PRT

<213> Homo Sapien

<400> 157

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			20						25					30
Ala	Leu	Pro	Ala	Gly	Arg	His	Pro	Pro	Val	Val	Leu	Val	Pro	Gly
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Asp	Leu	Gly	Asn	Gln	Leu	Glu	Ala	Lys	Leu	Asp	Lys	Pro	Thr	Val
			50						55					60
Val	His	Tyr	Leu	Cys	Ser	Lys	Lys	Thr	Glu	Ser	Tyr	Phe	Thr	Ile
			65						70					75
Trp	Leu	Asn	Leu	Glu	Leu	Leu	Leu	Pro	Val	Ile	Ile	Asp	Cys	Trp
			80						85					90
Ile	Asp	Asn	Ile	Arg	Leu	Val	Tyr	Asn	Lys	Thr	Ser	Arg	Ala	Thr
			95						100					105
Gln	Phe	Pro	Asp	Gly	Val	Asp	Val	Arg	Val	Pro	Gly	Phe	Gly	Lys

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Thr	Phe	Ser	Leu	Glu	Phe	Leu	Asp	Pro	Ser	Lys	Ser	Ser	Val	Gly
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Ser	Tyr	Phe	His	Thr	Met	Val	Glu	Ser	Leu	Val	Gly	Trp	Gly	Tyr
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Thr	Arg	Gly	Glu	Asp	Val	Arg	Gly	Ala	Pro	Tyr	Asp	Trp	Arg	Arg
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Ala	Pro	Asn	Glu	Asn	Gly	Pro	Tyr	Phe	Leu	Ala	Leu	Arg	Glu	Met
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Ile	Glu	Glu	Met	Tyr	Gln	Leu	Tyr	Gly	Gly	Pro	Val	Val	Leu	Val
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Ala	His	Ser	Met	Gly	Asn	Met	Tyr	Thr	Leu	Tyr	Phe	Leu	Gln	Arg
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Gln	Pro	Gln	Ala	Trp	Lys	Asp	Lys	Tyr	Ile	Arg	Ala	Phe	Val	Ser
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Leu	Gly	Ala	Pro	Trp	Gly	Gly	Val	Ala	Lys	Thr	Leu	Arg	Val	Leu
				230					235					240
Ala	Ser	Gly	Asp	Asn	Asn	Arg	Ile	Pro	Val	Ile	Gly	Pro	Leu	Lys
				245					250					255
Ile	Arg	Glu	Gln	Gln	Arg	Ser	Ala	Val	Ser	Thr	Ser	Trp	Leu	Leu
				260					265					270
Pro	Tyr	Asn	Tyr	Thr	Trp	Ser	Pro	Glu	Lys	Val	Phe	Val	Gln	Thr
				275					280					285
Pro	Thr	Ile	Asn	Tyr	Thr	Leu	Arg	Asp	Tyr	Arg	Lys	Phe	Phe	Gln
				290					295					300
Asp	Ile	Gly	Phe	Glu	Asp	Gly	Trp	Leu	Met	Arg	Gln	Asp	Thr	Glu
				305					310					315
Gly	Leu	Val	Glu	Ala	Thr	Met	Pro	Pro	Gly	Val	Gln	Leu	His	Cys
				320					325					330
Leu	Tyr	Gly	Thr	Gly	Val	Pro	Thr	Pro	Asp	Ser	Phe	Tyr	Tyr	Glu
				335					340					345
Ser	Phe	Pro	Asp	Arg	Asp	Pro	Lys	Ile	Cys	Phe	Gly	Asp	Gly	Asp
				350					355					360
Gly	Thr	Val	Asn	Leu	Lys	Ser	Ala	Leu	Gln	Cys	Gln	Ala	Trp	Gln
				365					370					375
Ser	Arg	Gln	Glu	His	Gln	Val	Leu	Leu	Gln	Glu	Leu	Pro	Gly	Ser
				380					385					390
Glu	His	Ile	Glu	Met	Leu	Ala	Asn	Ala	Thr	Thr	Leu	Ala	Tyr	Leu
				395					400					405

Lys Arg Val Leu Leu Gly Pro  
410

<210> 158

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 158

ctggggctac acacggggtg agg 23

<210> 159

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 159

ggtgccgctg cagaaagtag agcg 24

<210> 160

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 160

gccccaaatg aaaacggggc ctacttcctg gccctccgcg agatg 45

<210> 161

<211> 1512

<212> DNA

<213> Homo sapiens

<400> 161

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atggagagcg gggcctacgg cgcggccaaag gcggggcggt ccttcgacct 100

gcggcgcttc ctgacgcagc cgcaggtggt ggcgcgcgcc gtgtgcttgg 150

tcttcgcctt gatcgtgttc tcttgcattc atggtgaggg ctacagcaat 200

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<210> 162

<211> 224

<212> PRT

<213> Homo sapiens

<400> 162

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20 25 30

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Glu	Gly	Tyr	Ser	Asn	Ala	His	Glu	Ser	Lys	Gln	Met	Tyr	Cys	Val	50	55	60
Phe	Asn	Arg	Asn	Glu	Asp	Ala	Cys	Arg	Tyr	Gly	Ser	Ala	Ile	Gly	65	70	75
Val	Leu	Ala	Phe	Leu	Ala	Ser	Ala	Phe	Phe	Leu	Val	Val	Asp	Ala	80	85	90
Tyr	Phe	Pro	Gln	Ile	Ser	Asn	Ala	Thr	Asp	Arg	Lys	Tyr	Leu	Val	95	100	105
Ile	Gly	Asp	Leu	Leu	Phe	Ser	Ala	Leu	Trp	Thr	Phe	Leu	Trp	Phe	110	115	120
Val	Gly	Phe	Cys	Phe	Leu	Thr	Asn	Gln	Trp	Ala	Val	Thr	Asn	Pro	125	130	135
Lys	Asp	Val	Leu	Val	Gly	Ala	Asp	Ser	Val	Arg	Ala	Ala	Ile	Thr	140	145	150
Phe	Ser	Phe	Phe	Ser	Ile	Phe	Ser	Trp	Gly	Val	Leu	Ala	Ser	Leu	155	160	165
Ala	Tyr	Gln	Arg	Tyr	Lys	Ala	Gly	Val	Asp	Asp	Phe	Ile	Gln	Asn	170	175	180
Tyr	Val	Asp	Pro	Thr	Pro	Asp	Pro	Asn	Thr	Ala	Tyr	Ala	Ser	Tyr	185	190	195
Pro	Gly	Ala	Ser	Val	Asp	Asn	Tyr	Gln	Gln	Pro	Pro	Phe	Thr	Gln	200	205	210
Asn	Ala	Glu	Thr	Thr	Glu	Gly	Tyr	Gln	Pro	Pro	Pro	Val	Tyr		215	220	

<210> 163  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 163  
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<210> 164  
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<220>  
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<400> 164  
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<210> 165  
 <211> 23  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 165  
 ctgaaggatga tggctgcct cac 23

<210> 166  
 <211> 23  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 166  
 ccaggaggct catgggaaag tcc 23

<210> 167  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 167  
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<210> 168  
 <211> 3143  
 <212> DNA  
 <213> Homo sapiens

<400> 168  
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<210> 169  
 <211> 802  
 <212> PRT  
 <213> Homo sapiens  
 <400> 169

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Cys	Glu	Asp	Ser	Lys	Arg	Lys	Ala	Arg	Gly	Tyr	Leu	Arg	Leu	Val	35	40	45	
Pro	Leu	Phe	Val	Leu	Leu	Ala	Leu	Leu	Val	Leu	Ala	Ser	Ala	Gly	50	55	60	
Val	Leu	Leu	Trp	Tyr	Phe	Leu	Gly	Tyr	Lys	Ala	Glu	Val	Met	Val	65	70	75	
Ser	Gln	Val	Tyr	Ser	Gly	Ser	Leu	Arg	Val	Leu	Asn	Arg	His	Phe	80	85	90	
Ser	Gln	Asp	Leu	Thr	Arg	Arg	Glu	Ser	Ser	Ala	Phe	Arg	Ser	Glu	95	100	105	
Thr	Ala	Lys	Ala	Gln	Lys	Met	Leu	Lys	Glu	Leu	Ile	Thr	Ser	Thr	110	115	120	
Arg	Leu	Gly	Thr	Tyr	Tyr	Asn	Ser	Ser	Ser	Val	Tyr	Ser	Phe	Gly	125	130	135	
Glu	Gly	Pro	Leu	Thr	Cys	Phe	Phe	Trp	Phe	Ile	Leu	Gln	Ile	Pro	140	145	150	
Glu	His	Arg	Arg	Leu	Met	Leu	Ser	Pro	Glu	Val	Val	Gln	Ala	Leu	155	160	165	
Leu	Val	Glu	Glu	Leu	Leu	Ser	Thr	Val	Asn	Ser	Ser	Ala	Ala	Val	170	175	180	
Pro	Tyr	Arg	Ala	Glu	Tyr	Glu	Val	Asp	Pro	Glu	Gly	Leu	Val	Ile	185	190	195	
Leu	Glu	Ala	Ser	Val	Lys	Asp	Ile	Ala	Ala	Leu	Asn	Ser	Thr	Leu	200	205	210	
Gly	Cys	Tyr	Arg	Tyr	Ser	Tyr	Val	Gly	Gln	Gly	Gln	Val	Leu	Arg	215	220	225	
Leu	Lys	Gly	Pro	Asp	His	Leu	Ala	Ser	Ser	Cys	Leu	Trp	His	Leu	230	235	240	
Gln	Gly	Pro	Lys	Asp	Leu	Met	Leu	Lys	Leu	Arg	Leu	Glu	Trp	Thr	245	250	255	
Leu	Ala	Glu	Cys	Arg	Asp	Arg	Leu	Ala	Met	Tyr	Asp	Val	Ala	Gly	260	265	270	
Pro	Leu	Glu	Lys	Arg	Leu	Ile	Thr	Ser	Val	Tyr	Gly	Cys	Ser	Arg	275	280	285	
Gln	Glu	Pro	Val	Val	Glu	Val	Leu	Ala	Ser	Gly	Ala	Ile	Met	Ala				

290										295				300			
Val	Val	Trp	Lys	Lys	Gly	Leu	His	Ser	Tyr	Tyr	Asp	Pro	Phe	Val			
				305					310					315			
Leu	Ser	Val	Gln	Pro	Val	Val	Phe	Gln	Ala	Cys	Glu	Val	Asn	Leu			
				320					325					330			
Thr	Leu	Asp	Asn	Arg	Leu	Asp	Ser	Gln	Gly	Val	Leu	Ser	Thr	Pro			
				335					340					345			
Tyr	Phe	Pro	Ser	Tyr	Tyr	Ser	Pro	Gln	Thr	His	Cys	Ser	Trp	His			
				350					355					360			
Leu	Thr	Val	Pro	Ser	Leu	Asp	Tyr	Gly	Leu	Ala	Leu	Trp	Phe	Asp			
				365					370					375			
Ala	Tyr	Ala	Leu	Arg	Arg	Gln	Lys	Tyr	Asp	Leu	Pro	Cys	Thr	Gln			
				380					385					390			
Gly	Gln	Trp	Thr	Ile	Gln	Asn	Arg	Arg	Leu	Cys	Gly	Leu	Arg	Ile			
				395					400					405			
Leu	Gln	Pro	Tyr	Ala	Glu	Arg	Ile	Pro	Val	Val	Ala	Thr	Ala	Gly			
				410					415					420			
Ile	Thr	Ile	Asn	Phe	Thr	Ser	Gln	Ile	Ser	Leu	Thr	Gly	Pro	Gly			
				425					430					435			
Val	Arg	Val	His	Tyr	Gly	Leu	Tyr	Asn	Gln	Ser	Asp	Pro	Cys	Pro			
				440					445					450			
Gly	Glu	Phe	Leu	Cys	Ser	Val	Asn	Gly	Leu	Cys	Val	Pro	Ala	Cys			
				455					460					465			
Asp	Gly	Val	Lys	Asp	Cys	Pro	Asn	Gly	Leu	Asp	Glu	Arg	Asn	Cys			
				470					475					480			
Val	Cys	Arg	Ala	Thr	Phe	Gln	Cys	Lys	Glu	Asp	Ser	Thr	Cys	Ile			
				485					490					495			
Ser	Leu	Pro	Lys	Val	Cys	Asp	Gly	Gln	Pro	Asp	Cys	Leu	Asn	Gly			
				500					505					510			
Ser	Asp	Glu	Glu	Gln	Cys	Gln	Glu	Gly	Val	Pro	Cys	Gly	Thr	Phe			
				515					520					525			
Thr	Phe	Gln	Cys	Glu	Asp	Arg	Ser	Cys	Val	Lys	Lys	Pro	Asn	Pro			
				530					535					540			
Gln	Cys	Asp	Gly	Arg	Pro	Asp	Cys	Arg	Asp	Gly	Ser	Asp	Glu	Glu			
				545					550					555			
His	Cys	Asp	Cys	Gly	Leu	Gln	Gly	Pro	Ser	Ser	Arg	Ile	Val	Gly			
				560					565					570			
Gly	Ala	Val	Ser	Ser	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu			
				575					580					585			

Gln Val Arg Gly	Arg His Ile Cys Gly	Gly Ala Leu Ile Ala Asp	590	595	600
Arg Trp Val Ile	Thr Ala Ala His Cys	Phe Gln Glu Asp Ser Met	605	610	615
Ala Ser Thr Val	Leu Trp Thr Val Phe	Leu Gly Lys Val Trp Gln	620	625	630
Asn Ser Arg Trp	Pro Gly Glu Val Ser	Phe Lys Val Ser Arg Leu	635	640	645
Leu Leu His Pro	Tyr His Glu Glu Asp	Ser His Asp Tyr Asp Val	650	655	660
Ala Leu Leu Gln	Leu Asp His Pro Val	Val Arg Ser Ala Ala Val	665	670	675
Arg Pro Val Cys	Leu Pro Ala Arg Ser	His Phe Phe Glu Pro Gly	680	685	690
Leu His Cys Trp	Ile Thr Gly Trp Gly	Ala Leu Arg Glu Gly Gly	695	700	705
Pro Ile Ser Asn	Ala Leu Gln Lys Val	Asp Val Gln Leu Ile Pro	710	715	720
Gln Asp Leu Cys	Ser Glu Ala Tyr Arg	Tyr Gln Val Thr Pro Arg	725	730	735
Met Leu Cys Ala	Gly Tyr Arg Lys Gly	Lys Lys Asp Ala Cys Gln	740	745	750
Gly Asp Ser Gly	Gly Pro Leu Val Cys	Lys Ala Leu Ser Gly Arg	755	760	765
Trp Phe Leu Ala	Gly Leu Val Ser Trp	Gly Leu Gly Cys Gly Arg	770	775	780
Pro Asn Tyr Phe	Gly Val Tyr Thr Arg	Ile Thr Gly Val Ile Ser	785	790	795
Trp Ile Gln Gln	Val Val Thr		800		

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 <212> DNA  
 <213> Homo sapiens

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 atcctgcagc cctacgccga gaggatcccc gtggtggcca cggccgggat 100  
 caccatcaac ttcacctccc agatctccct caccgggccc ggtgtgcggg 150  
 tgcactatgg cttgtacaac cagtcggacc cctgccttg agagttcctc 200

tgttctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250  
 ccccaacggc ctggatgaga gaaactgcgt ttgcagagcc acattccagt 300  
 gcaaagagga cagcacatgc atctcactgc ccaaggctctg tgatgggcag 350  
 cctgattgtc tcaacggcag cgatgaagag cagtgccagg aaggggtgcc 400  
 atgtgggaca ttcaccttcc agtgtgagga ccggagctgc gtgaagaagc 450  
 ccaacccgca gtgtgatggg cggcccgaact gcagggacgg ctcggatgag 500  
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 ggggtcgaca catctgtggg ggggccctca tcgctgaccg ctgggtgata 650  
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 ggacctgtgc agcgaggcct atcgctacca ggtgacgcca cgcattgctgt 1050  
 gtgccggcta ccgcaagggc aagaaggatg cctgtcaggg tgactcaggt 1100  
 ggtccgctgg tgtgcaaggc actcagtggc cgctgggttc tggcggggct 1150  
 ggtcagctgg ggctggggct gtggccggcc taactacttc ggcgtctaca 1200  
 cccgcatcac aggtgtgatc agctggatcc agcaagtggg gacctgagga 1250  
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 gcaactgcca agcaggggga caagtat 1327

<210> 171

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 171

taacagctgc ccactgcttc cagg 24

<210> 172

<211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 172  
 taatccagca gtgcaggccg gg 22  
  
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 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 173  
 atggcctcca cgggtgctgtg gaccgtgttc ctgggcaagg tgtggcagaa 50  
  
 <210> 174  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 174  
 tgcctatgca ctgaggaggc agaag 25  
  
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 <213> Artificial Sequence  
  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 175  
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 <210> 176  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 176  
 agtatgattt gccgtgcacc cagggccagt ggacgatcca gaacaggagg 50  
  
 <210> 177  
 <211> 1510  
 <212> DNA  
 <213> Homo sapiens

<400> 177

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ctccagtcce ccagcccctg gccgagagaa gggctctacc ggccgggatt 150  
gctggaaaca ccaagaggtg gtttttgttt tttaaaactt ctgtttcttg 200  
ggaggggggtg tggcgggggca ggatgagcaa ctccgttcct ctgctctgtt 250  
tctggagcct ctgctattgc tttgctgcgg ggagccccgt accttttggg 300  
ccagaggggac ggctggaaga taagctccac aaacccaaag ctacacagac 350  
tgaggtcaaa ccatctgtga ggtttaacct ccgcacctcc aaggaccag 400  
agcatgaagg atgctacctc tccgtcggcc acagccagcc cttagaagac 450  
tgcagtttca acatgacagc taaaaccttt ttcattcttc acggatggac 500  
gatgagcggg atctttgaaa actggctgca caaactcgtg tcagccctgc 550  
acacaagaga gaaagacgcc aatgtagttg tgggtgactg gctccccctg 600  
gcccaccagc ttacacgga tgcggtaaat aataccaggg tgggtgggaca 650  
cagcattgcc aggatgctcg actggctgca ggagaaggac gatttttctc 700  
tcgggaatgt ccacttgatc ggctacagcc tcggagcgca cgtggccggg 750  
tatgcaggca acttcgtgaa aggaacgggt ggccgaatca caggtttgga 800  
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cggacgatgc agattttgtg gatgtcctcc acacctacac gcgttccttc 900  
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gccgtccacc tctttgttga ctctctgggt aatcaggaca agccgagttt 1100  
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tttcagaggt aaccttcagt cctggagtg tccctgagga aggcccttaa 1300  
tacctccttc ttaataccat gctgcagagc agggcacatc ctagcccagg 1350  
agaagtggcc agcacaatcc aatcaaatcg ttgcaaatca gattacactg 1400  
tgcatgtcct aggaaggga atctttacaa aataaacagt gtggaccct 1450

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500

aaaaaaaaa 1510

<210> 178

<211> 354

<212> PRT

<213> Homo sapiens

<400> 178

Met	Ser	Asn	Ser	Val	Pro	Leu	Leu	Cys	Phe	Trp	Ser	Leu	Cys	Tyr
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Cys	Phe	Ala	Ala	Gly	Ser	Pro	Val	Pro	Phe	Gly	Pro	Glu	Gly	Arg
				20					25					30

Leu	Glu	Asp	Lys	Leu	His	Lys	Pro	Lys	Ala	Thr	Gln	Thr	Glu	Val
				35					40					45

Lys	Pro	Ser	Val	Arg	Phe	Asn	Leu	Arg	Thr	Ser	Lys	Asp	Pro	Glu
				50					55					60

His	Glu	Gly	Cys	Tyr	Leu	Ser	Val	Gly	His	Ser	Gln	Pro	Leu	Glu
				65					70					75

Asp	Cys	Ser	Phe	Asn	Met	Thr	Ala	Lys	Thr	Phe	Phe	Ile	Ile	His
				80					85					90

Gly	Trp	Thr	Met	Ser	Gly	Ile	Phe	Glu	Asn	Trp	Leu	His	Lys	Leu
				95					100					105

Val	Ser	Ala	Leu	His	Thr	Arg	Glu	Lys	Asp	Ala	Asn	Val	Val	Val
				110					115					120

Val	Asp	Trp	Leu	Pro	Leu	Ala	His	Gln	Leu	Tyr	Thr	Asp	Ala	Val
				125					130					135

Asn	Asn	Thr	Arg	Val	Val	Gly	His	Ser	Ile	Ala	Arg	Met	Leu	Asp
				140					145					150

Trp	Leu	Gln	Glu	Lys	Asp	Asp	Phe	Ser	Leu	Gly	Asn	Val	His	Leu
				155					160					165

Ile	Gly	Tyr	Ser	Leu	Gly	Ala	His	Val	Ala	Gly	Tyr	Ala	Gly	Asn
				170					175					180

Phe	Val	Lys	Gly	Thr	Val	Gly	Arg	Ile	Thr	Gly	Leu	Asp	Pro	Ala
				185					190					195

Gly	Pro	Met	Phe	Glu	Gly	Ala	Asp	Ile	His	Lys	Arg	Leu	Ser	Pro
				200					205					210

Asp	Asp	Ala	Asp	Phe	Val	Asp	Val	Leu	His	Thr	Tyr	Thr	Arg	Ser
				215					220					225

Phe	Gly	Leu	Ser	Ile	Gly	Ile	Gln	Met	Pro	Val	Gly	His	Ile	Asp
				230					235					240



Ile Tyr Pro Asn Gly Gly Asp Phe Gln Pro Gly Cys Gly Leu Asn	245	250	255
Asp Val Leu Gly Ser Ile Ala Tyr Gly Thr Ile Thr Glu Val Val	260	265	270
Lys Cys Glu His Glu Arg Ala Val His Leu Phe Val Asp Ser Leu	275	280	285
Val Asn Gln Asp Lys Pro Ser Phe Ala Phe Gln Cys Thr Asp Ser	290	295	300
Asn Arg Phe Lys Lys Gly Ile Cys Leu Ser Cys Arg Lys Asn Arg	305	310	315
Cys Asn Ser Ile Gly Tyr Asn Ala Lys Lys Met Arg Asn Lys Arg	320	325	330
Asn Ser Lys Met Tyr Leu Lys Thr Arg Ala Gly Met Pro Phe Arg	335	340	345
Gly Asn Leu Gln Ser Leu Glu Cys Pro	350		

<210> 179

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 179

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<210> 180

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 180

gctattacaa cggttcttgc ggcagc 26

<210> 181

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<212> DNA

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<220>

<223> Synthetic oligonucleotide probe

<400> 181

ttgactctct ggtgaatcag gacaagccga gttttgcctt ccag 44

<210> 182

<211> 3240  
<212> DNA  
<213> Homo sapiens

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acgcgctgga ggagtggagc agcaccgggc cggccctggg ggctgacagt 150  
cggcaaagtt tggcccgaag aggaagtggc ctcaaaccac ggcaggtggc 200  
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 caccggaatg ccaattaact agagaccctc cagcccccaa ggggaggatt 3100  
 tgggcagaac ctgaggtttt gccatccaca atccctccta cagggcctgg 3150  
 ctcacaaaaa gagtgaaca aatgcttcta ttccatagct acggcattgc 3200  
 tcagtaagtt gaggtcaaaa ataaaggaat catacatctc 3240

<210> 183  
 <211> 713  
 <212> PRT  
 <213> Homo sapiens

<400> 183  
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 Pro Pro Ala Val Leu Leu Glu Val Gln Gly Thr Leu Gln Arg Pro  
 35 40 45  
 Leu Val Arg Asp Ser Arg Thr Ser Pro Ala Asn Cys Thr Trp Leu  
 50 55 60  
 Ile Leu Gly Ser Lys Glu Gln Thr Val Thr Ile Arg Phe Gln Lys  
 65 70 75  
 Leu His Leu Ala Cys Gly Ser Glu Arg Leu Thr Leu Arg Ser Pro  
 80 85 90  
 Leu Gln Pro Leu Ile Ser Leu Cys Glu Ala Pro Pro Ser Pro Leu  
 95 100 105  
 Gln Leu Pro Gly Gly Asn Val Thr Ile Thr Tyr Ser Tyr Ala Gly  
 110 115 120  
 Ala Arg Ala Pro Met Gly Gln Gly Phe Leu Leu Ser Tyr Ser Gln  
 125 130 135  
 Asp Trp Leu Met Cys Leu Gln Glu Glu Phe Gln Cys Leu Asn His  
 140 145 150  
 Arg Cys Val Ser Ala Val Gln Arg Cys Asp Gly Val Asp Ala Cys  
 155 160 165  
 Gly Asp Gly Ser Asp Glu Ala Gly Cys Ser Ser Asp Pro Phe Pro

170					175					180				
Gly	Leu	Thr	Pro	Arg	Pro	Val	Pro	Ser	Leu	Pro	Cys	Asn	Val	Thr
				185					190					195
Leu	Glu	Asp	Phe	Tyr	Gly	Val	Phe	Ser	Ser	Pro	Gly	Tyr	Thr	His
				200					205					210
Leu	Ala	Ser	Val	Ser	His	Pro	Gln	Ser	Cys	His	Trp	Leu	Leu	Asp
				215					220					225
Pro	His	Asp	Gly	Arg	Arg	Leu	Ala	Val	Arg	Phe	Thr	Ala	Leu	Asp
				230					235					240
Leu	Gly	Phe	Gly	Asp	Ala	Val	His	Val	Tyr	Asp	Gly	Pro	Gly	Pro
				245					250					255
Pro	Glu	Ser	Ser	Arg	Leu	Leu	Arg	Ser	Leu	Thr	His	Phe	Ser	Asn
				260					265					270
Gly	Lys	Ala	Val	Thr	Val	Glu	Thr	Leu	Ser	Gly	Gln	Ala	Val	Val
				275					280					285
Ser	Tyr	His	Thr	Val	Ala	Trp	Ser	Asn	Gly	Arg	Gly	Phe	Asn	Ala
				290					295					300
Thr	Tyr	His	Val	Arg	Gly	Tyr	Cys	Leu	Pro	Trp	Asp	Arg	Pro	Cys
				305					310					315
Gly	Leu	Gly	Ser	Gly	Leu	Gly	Ala	Gly	Glu	Gly	Leu	Gly	Glu	Arg
				320					325					330
Cys	Tyr	Ser	Glu	Ala	Gln	Arg	Cys	Asp	Gly	Ser	Trp	Asp	Cys	Ala
				335					340					345
Asp	Gly	Thr	Asp	Glu	Glu	Asp	Cys	Pro	Gly	Cys	Pro	Pro	Gly	His
				350					355					360
Phe	Pro	Cys	Gly	Ala	Ala	Gly	Thr	Ser	Gly	Ala	Thr	Ala	Cys	Tyr
				365					370					375
Leu	Pro	Ala	Asp	Arg	Cys	Asn	Tyr	Gln	Thr	Phe	Cys	Ala	Asp	Gly
				380					385					390
Ala	Asp	Glu	Arg	Arg	Cys	Arg	His	Cys	Gln	Pro	Gly	Asn	Phe	Arg
				395					400					405
Cys	Arg	Asp	Glu	Lys	Cys	Val	Tyr	Glu	Thr	Trp	Val	Cys	Asp	Gly
				410					415					420
Gln	Pro	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Trp	Asp	Cys	Ser	Tyr
				425					430					435
Val	Leu	Pro	Arg	Lys	Val	Ile	Thr	Ala	Ala	Val	Ile	Gly	Ser	Leu
				440					445					450
Val	Cys	Gly	Leu	Leu	Leu	Val	Ile	Ala	Leu	Gly	Cys	Thr	Cys	Lys
				455					460					465

Leu Tyr Ala Ile	Arg Thr Gln Glu Tyr	Ser Ile Phe Ala Pro	Leu
470	475		480
Ser Arg Met Glu	Ala Glu Ile Val Gln	Gln Gln Ala Pro Pro	Ser
485	490		495
Tyr Gly Gln Leu	Ile Ala Gln Gly Ala	Ile Pro Pro Val Glu	Asp
500	505		510
Phe Pro Thr Glu	Asn Pro Asn Asp Asn	Ser Val Leu Gly Asn	Leu
515	520		525
Arg Ser Leu Leu	Gln Ile Leu Arg Gln	Asp Met Thr Pro Gly	Gly
530	535		540
Gly Pro Gly Ala	Arg Arg Arg Gln Arg	Gly Arg Leu Met Arg	Arg
545	550		555
Leu Val Arg Arg	Leu Arg Arg Trp Gly	Leu Leu Pro Arg Thr	Asn
560	565		570
Thr Pro Ala Arg	Ala Ser Glu Ala Arg	Ser Gln Val Thr Pro	Ser
575	580		585
Ala Ala Pro Leu	Glu Ala Leu Asp Gly	Gly Thr Gly Pro Ala	Arg
590	595		600
Glu Gly Gly Ala	Val Gly Gly Gln Asp	Gly Glu Gln Ala Pro	Pro
605	610		615
Leu Pro Ile Lys	Ala Pro Leu Pro Ser	Ala Ser Thr Ser Pro	Ala
620	625		630
Pro Thr Thr Val	Pro Glu Ala Pro Gly	Pro Leu Pro Ser Leu	Pro
635	640		645
Leu Glu Pro Ser	Leu Leu Ser Gly Val	Val Gln Ala Leu Arg	Gly
650	655		660
Arg Leu Leu Pro	Ser Leu Gly Pro Pro	Gly Pro Thr Arg Ser	Pro
665	670		675
Pro Gly Pro His	Thr Ala Val Leu Ala	Leu Glu Asp Glu Asp	Asp
680	685		690
Val Leu Leu Val	Pro Leu Ala Glu Pro	Gly Val Trp Val Ala	Glu
695	700		705
Ala Glu Asp Glu	Pro Leu Leu Thr		
710			

<210> 184

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 184  
 ggctgtcact gtggagacac 20

<210> 185  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 185  
 gcaaggtcat tacagctg 18

<210> 186  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 186  
 agaacatagg agcagtccca ctc 23

<210> 187  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 187  
 tgcctgctgc tgcacaatct cag 23

<210> 188  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 188  
 ggctattgct tgccttgga cagaccctgt ggcttaggct ctggc 45

<210> 189  
 <211> 663  
 <212> DNA  
 <213> Homo sapiens

<400> 189  
 cgagctgggc gagaagtagg ggagggcggt gctccgccgc ggtggcggtt 50  
 gctatcgctt cgcagaacct actcaggcag ccagctgaga agagttgagg 100  
 gaaagtgctg ctgctgggtc tgcagacgcg atggataacg tgcagccgaa 150

aataaaacat cgcccccttct gcttcagtgt gaaaggccac gtgaagatgc 200  
tgcggctggc actaactgtg acatctatga ccttttttat catcgacaaa 250  
gccccgaac catatattgt tatcactgga tttgaagtca ccgttatctt 300  
atttttcata ctttttatatg tactcagact tgatcgatta atgaagtggc 350  
tattttggcc tttgcttgat attatcaact cactggtaac aacagtattc 400  
atgctcatcg tatctgtgtt ggcactgata ccagaaacca caacattgac 450  
agttgggtgga ggggtgtttg cacttgtagc agcagtatgc tgtcttgccg 500  
acggggccct tatttaccgg aagcttctgt tcaatcccag cggtccttac 550  
cagaaaaagc ctgtgcatga aaaaaaagaa gttttgtaat tttatattac 600  
tttttagttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650  
aaaaaaaaaa aaa 663

<210> 190  
<211> 152  
<212> PRT  
<213> Homo sapiens

<400> 190  
Met Asp Asn Val Gln Pro Lys Ile Lys His Arg Pro Phe Cys Phe  
1 5 10 15  
Ser Val Lys Gly His Val Lys Met Leu Arg Leu Ala Leu Thr Val  
20 25 30  
Thr Ser Met Thr Phe Phe Ile Ile Ala Gln Ala Pro Glu Pro Tyr  
35 40 45  
Ile Val Ile Thr Gly Phe Glu Val Thr Val Ile Leu Phe Phe Ile  
50 55 60  
Leu Leu Tyr Val Leu Arg Leu Asp Arg Leu Met Lys Trp Leu Phe  
65 70 75  
Trp Pro Leu Leu Asp Ile Ile Asn Ser Leu Val Thr Thr Val Phe  
80 85 90  
Met Leu Ile Val Ser Val Leu Ala Leu Ile Pro Glu Thr Thr Thr  
95 100 105  
Leu Thr Val Gly Gly Gly Val Phe Ala Leu Val Thr Ala Val Cys  
110 115 120  
Cys Leu Ala Asp Gly Ala Leu Ile Tyr Arg Lys Leu Leu Phe Asn  
125 130 135  
Pro Ser Gly Pro Tyr Gln Lys Lys Pro Val His Glu Lys Lys Glu  
140 145 150



Val Leu

<210> 191  
<211> 495  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 78, 212, 234, 487  
<223> unknown base

<400> 191  
gggcgagaag taggggaggg cgtgttccgc cgcggtggcg gttgctatcg 50  
ttttgcagaa cctactcagg cagccagntg agaagagttg agggaaagtg 100  
ctgtgctggt gtctgcagac gcgatggata acgtgcagcc gaaaataaaa 150  
catcgccccct tctgcttcag tgtgaaaggc cacgtgaaga tgctgcggct 200  
ggcactaact gngacatcta tgaccttttt tatnatcgca caagcccctg 250  
aaccatatat tggtatcact ggatttgaag tcaccgttat cttatttttc 300  
atacttttat atgtactcag acttgatcga ttaatgaagt gggtattttg 350  
gccttttgctt gatattatca actcactggt aacaacagta ttcatgctca 400  
tcgtatctgt gttggcactg ataccagaaa ccacaacatt gacagttggt 450  
ggaggggtgt ttgcacttgt gacagcagta tgctgtnttg ccgac 495

<210> 192  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 192  
cgttttgcag aacctactca ggcag 25

<210> 193  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 193  
cctccaccaa ctgtcaatgt tgtgg 25

<210> 194  
<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 194

aaagtgtgc tgctgggtct gcagacgcga tggataacgt 40

<210> 195

<211> 1879

<212> DNA

<213> Homo sapien

<400> 195

cagccccgcg cgccggccga gtcgtgagc cgcggtgcc ggacgggacg 50

ggaccggcta ggctgggccc gccccccggg ccccgccgtg ggcatgggag 100

caactggccc ggcgctgtg ctgcctctgc tggcccagtg gtccttgcgc 150

gccgccccgg agctggcccc cgcgcccttc acgctgcccc tccgggtggc 200

cgcgggccacg aaccgcgtag ttgcgcccac cccgggaccc gggacccttg 250

ccgagcgcca cgccgacggc ttggcgctcg ccctggagcc tgccttggcg 300

tccccgcgg gcgcccga cttcttggcc atggtagaca acctgcaggg 350

ggactctggc cgcggtact acctggagat gctgatcggg accccccgc 400

agaagctaca gattctcgtt gacactggaa gcagtaactt tgccgtggca 450

ggaacccgc actctacat agacacgtac tttgacacag agaggtctag 500

cacataccgc tccaagggct ttgacgtcac agtgaagtac acacaaggaa 550

gctggacggg cttcgttggg gaagacctcg tcaccatccc caaaggcttc 600

aatacttctt ttcttgtcaa cattgccact atttttgaat cagagaattt 650

ctttttgcct gggattaaat ggaatggaat acttggccta gcttatgcca 700

cacttgccaa gccatcaagt tctctggaga ccttcttcga ctccctgggtg 750

acacaagcaa acatcccaa cgttttctcc atgcagatgt gtggagccgg 800

cttgcccgtt gctggatctg ggaccaacgg aggtagtctt gtcttgggtg 850

gaattgaacc aagtttgtat aaaggagaca tctggtatac ccctattaag 900

gaagagtggg actaccagat agaaattctg aaattggaaa ttggaggcca 950

aagccttaat ctggactgca gagagtataa cgcagacaag gccatcgtgg 1000

acagtggcac cacgtgctg cgctgcccc agaagggtgt tgatgcgggtg 1050

gtggaagctg tggccgcgc atctctgatt ccagaattct ctgatgggtt 1100

ctggactggg tcccagctgg cgtgctggac gaattcggaa acaccttggt 1150  
 cttacttccc taaaatctcc atctacctga gagacgagaa ctccagcagg 1200  
 tcattccgta tcacaatcct gcctcagctt tacattcagc ccatgatggg 1250  
 ggccggcctg aattatgaat gttaccgatt cggcatttcc ccatccacaa 1300  
 atgcgctggt gatcggtgcc acggtgatgg agggcttcta cgtcatcttc 1350  
 gacagagccc agaagagggt gggcttcgca gcgagcccct gtgcagaaat 1400  
 tgcagggtgt gcagtgtctg aaatttcggg gcctttctca acagaggatg 1450  
 tagccagcaa ctgtgtcccc gctcagtctt tgagcgagcc cattttgtgg 1500  
 attgtgtcct atgcgctcat gagcgtctgt ggagccatcc tccttgtctt 1550  
 aatcgtcctg ctgctgctgc cgttccgggtg tcagcgtcgc ccccgtagacc 1600  
 ctgagggtcgt caatgatgag tcctctctgg tcagacatcg ctggaaatga 1650  
 atagccaggc ctgacctcaa gcaaccatga actcagctat taagaaaatc 1700  
 acatttcag ggcagcagcc gggatcgatg gtggcgcttt ctctgtgcc 1750  
 caccgtctt caatctctgt tctgtccca gatgccttct agattcactg 1800  
 tcttttgatt cttgattttc aagctttcaa atctcccta cttccaagaa 1850  
 aaataattaa aaaaaaaact tcattctaa 1879

<210> 196  
 <211> 518  
 <212> PRT  
 <213> Homo sapien

<400> 196  
 Met Gly Ala Leu Ala Arg Ala Leu Leu Leu Pro Leu Leu Ala Gln  
 1 5 10 15  
 Trp Leu Leu Arg Ala Ala Pro Glu Leu Ala Pro Ala Pro Phe Thr  
 20 25 30  
 Leu Pro Leu Arg Val Ala Ala Ala Thr Asn Arg Val Val Ala Pro  
 35 40 45  
 Thr Pro Gly Pro Gly Thr Pro Ala Glu Arg His Ala Asp Gly Leu  
 50 55 60  
 Ala Leu Ala Leu Glu Pro Ala Leu Ala Ser Pro Ala Gly Ala Ala  
 65 70 75  
 Asn Phe Leu Ala Met Val Asp Asn Leu Gln Gly Asp Ser Gly Arg  
 80 85 90  
 Gly Tyr Tyr Leu Glu Met Leu Ile Gly Thr Pro Pro Gln Lys Leu  
 95 100 105

Gln	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala	Val	Ala	Gly	110	115	120
Thr	Pro	His	Ser	Tyr	Ile	Asp	Thr	Tyr	Phe	Asp	Thr	Glu	Arg	Ser	125	130	135
Ser	Thr	Tyr	Arg	Ser	Lys	Gly	Phe	Asp	Val	Thr	Val	Lys	Tyr	Thr	140	145	150
Gln	Gly	Ser	Trp	Thr	Gly	Phe	Val	Gly	Glu	Asp	Leu	Val	Thr	Ile	155	160	165
Pro	Lys	Gly	Phe	Asn	Thr	Ser	Phe	Leu	Val	Asn	Ile	Ala	Thr	Ile	170	175	180
Phe	Glu	Ser	Glu	Asn	Phe	Phe	Leu	Pro	Gly	Ile	Lys	Trp	Asn	Gly	185	190	195
Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Thr	Leu	Ala	Lys	Pro	Ser	Ser	Ser	200	205	210
Leu	Glu	Thr	Phe	Phe	Asp	Ser	Leu	Val	Thr	Gln	Ala	Asn	Ile	Pro	215	220	225
Asn	Val	Phe	Ser	Met	Gln	Met	Cys	Gly	Ala	Gly	Leu	Pro	Val	Ala	230	235	240
Gly	Ser	Gly	Thr	Asn	Gly	Gly	Ser	Leu	Val	Leu	Gly	Gly	Ile	Glu	245	250	255
Pro	Ser	Leu	Tyr	Lys	Gly	Asp	Ile	Trp	Tyr	Thr	Pro	Ile	Lys	Glu	260	265	270
Glu	Trp	Tyr	Tyr	Gln	Ile	Glu	Ile	Leu	Lys	Leu	Glu	Ile	Gly	Gly	275	280	285
Gln	Ser	Leu	Asn	Leu	Asp	Cys	Arg	Glu	Tyr	Asn	Ala	Asp	Lys	Ala	290	295	300
Ile	Val	Asp	Ser	Gly	Thr	Thr	Leu	Leu	Arg	Leu	Pro	Gln	Lys	Val	305	310	315
Phe	Asp	Ala	Val	Val	Glu	Ala	Val	Ala	Arg	Ala	Ser	Leu	Ile	Pro	320	325	330
Glu	Phe	Ser	Asp	Gly	Phe	Trp	Thr	Gly	Ser	Gln	Leu	Ala	Cys	Trp	335	340	345
Thr	Asn	Ser	Glu	Thr	Pro	Trp	Ser	Tyr	Phe	Pro	Lys	Ile	Ser	Ile	350	355	360
Tyr	Leu	Arg	Asp	Glu	Asn	Ser	Ser	Arg	Ser	Phe	Arg	Ile	Thr	Ile	365	370	375
Leu	Pro	Gln	Leu	Tyr	Ile	Gln	Pro	Met	Met	Gly	Ala	Gly	Leu	Asn	380	385	390
Tyr	Glu	Cys	Tyr	Arg	Phe	Gly	Ile	Ser	Pro	Ser	Thr	Asn	Ala	Leu			

	395	400	405
Val Ile Gly Ala Thr Val Met Glu Gly Phe Tyr Val Ile Phe Asp	410	415	420
Arg Ala Gln Lys Arg Val Gly Phe Ala Ala Ser Pro Cys Ala Glu	425	430	435
Ile Ala Gly Ala Ala Val Ser Glu Ile Ser Gly Pro Phe Ser Thr	440	445	450
Glu Asp Val Ala Ser Asn Cys Val Pro Ala Gln Ser Leu Ser Glu	455	460	465
Pro Ile Leu Trp Ile Val Ser Tyr Ala Leu Met Ser Val Cys Gly	470	475	480
Ala Ile Leu Leu Val Leu Ile Val Leu Leu Leu Leu Pro Phe Arg	485	490	495
Cys Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu Ser	500	505	510
Ser Leu Val Arg His Arg Trp Lys	515		

<210> 197  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 197  
 cgcagaagct acagattctc g 21

<210> 198  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 198  
 ggaaattgga ggccaaagc 19

<210> 199  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 199  
 ggatgtagcc agcaactgtg 20

<210> 200  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 200  
gccttggctc gttctcttc 19

<210> 201  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 201  
ggtcctgtgc ctggatgg 18

<210> 202  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 202  
gacaagacta cctccgttgg tc 22

<210> 203  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 203  
tgatgcacag ttcagcacct gttg 24

<210> 204  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 204  
cgctccaagg gctttgacgt cacagtgaag tacacacaag gaagctg 47

<210> 205  
<211> 1939  
<212> DNA

<213> Homo sapiens

<400> 205

cgcctccgcc ttccggaggct gacgcgcccgc ggcgcgcgttc caggcctgtg 50  
cagggcggat cggcagccgc ctggcggcga tccagggcgg tgcggggcct 100  
gggcgggagc cgggaggcgc ggccggcatg gaggcgctgc tgcggggcgc 150  
gggggttgctg ctgggcgctt acgtgcttgt ctactacaac ctggtgaagg 200  
ccccgccgtg cggcggcatg ggcaacctgc ggggcgcgcac ggccgtggtc 250  
acgggcgcca acagcggcat cggaaagatg acggcgctgg agctggcgcg 300  
ccggggagcg cgcgtggtgc tggcctgccg cagccaggag cgcggggagg 350  
cggctgcctt cgacctccgc caggagagtg ggaacaatga ggtcatcttc 400  
atggccttgg acttggccag tctggcctcg gtgcgggcct ttgccactgc 450  
ctttctgagc tctgagccac ggttgacat cctcatccac aatgccggtg 500  
tcagttcctg tggccggacc cgtgaggcgt ttaacctgct gcttcgggtg 550  
aaccatateg gtccctttct gctgacacat ctgctgctgc cttgcctgaa 600  
ggcatgtgcc cctagccgcg tgggtggtgg agcctcagct gccactgtc 650  
ggggacgtct tgacttcaaa cgcttgacc gccagtggt gggctggcgg 700  
caggagctgc gggcatatgc tgacactaag ctggctaagt tactgtttgc 750  
ccgggagctc gccaaaccagc ttgaggccac tggcgtcacc tgctatgcag 800  
cccaccagg gcctgtgaac tcggagctgt tctgcgcga tgttcctgga 850  
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aagagggggt gccagacac ccctgtattg tgctctacaa gagggcatcg 950  
agcccctcag tgggagatat tttgccaact gccatgtgga agaggtgcct 1000  
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gaggagccca cagtttctca accttaccac agccctcaga gctcaccaga 1200  
tttgtctaag atgacgcacc gaattcaggc taaagttgag cctgagatcc 1250  
agctctccta accctcaggc caggatgctt gccatggcac ttcattggtcc 1300  
ttgaaaacct cggatgtgtg tgaggccatg ccctggacac tgacgggttt 1350  
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acatctcttt tcctggttga aggaataatg ggtgattatt tcttcctgag 1450  
 agtgacagta accccagatg gagagatagg ggtatgctag acactgtgct 1500  
 tctcggaaat ttggatgtag tattttcagg cccaccctt attgattctg 1550  
 atcagctctg gagcagaggc agggagtttg caatgtgatg cactgccaac 1600  
 attgagaatt agtgaactga tccctttgca accgtctagc taggtagtta 1650  
 aattaccccc atgttaatga agcggaatta ggctcccgag ctaagggact 1700  
 cgcctagggt ctcacagtga gtaggaggag ggctgggat ctgaacccaa 1750  
 gggctctgagg ccagggccga ctgccgtaag atgggtgctg agaagtgagt 1800  
 cagggcaggg cagctggtat cgaggtgccc catgggagta aggggacgcc 1850  
 ttccgggcgg atgcagggt ggggtcatct gtatctgaag cccctcggaa 1900  
 taaagcgcgt tgaccgcaa aaaaaaaaaa aaaaaaaaaa 1939

<210> 206

<211> 377

<212> PRT

<213> Homo sapiens

<400> 206

Met	Glu	Ala	Leu	Leu	Leu	Gly	Ala	Gly	Leu	Leu	Leu	Gly	Ala	Tyr	1	5	10	15
Val	Leu	Val	Tyr	Tyr	Asn	Leu	Val	Lys	Ala	Pro	Pro	Cys	Gly	Gly	20	25	30	
Met	Gly	Asn	Leu	Arg	Gly	Arg	Thr	Ala	Val	Val	Thr	Gly	Ala	Asn	35	40	45	
Ser	Gly	Ile	Gly	Lys	Met	Thr	Ala	Leu	Glu	Leu	Ala	Arg	Arg	Gly	50	55	60	
Ala	Arg	Val	Val	Leu	Ala	Cys	Arg	Ser	Gln	Glu	Arg	Gly	Glu	Ala	65	70	75	
Ala	Ala	Phe	Asp	Leu	Arg	Gln	Glu	Ser	Gly	Asn	Asn	Glu	Val	Ile	80	85	90	
Phe	Met	Ala	Leu	Asp	Leu	Ala	Ser	Leu	Ala	Ser	Val	Arg	Ala	Phe	95	100	105	
Ala	Thr	Ala	Phe	Leu	Ser	Ser	Glu	Pro	Arg	Leu	Asp	Ile	Leu	Ile	110	115	120	
His	Asn	Ala	Gly	Ile	Ser	Ser	Cys	Gly	Arg	Thr	Arg	Glu	Ala	Phe	125	130	135	
Asn	Leu	Leu	Leu	Arg	Val	Asn	His	Ile	Gly	Pro	Phe	Leu	Leu	Thr	140	145	150	



His	Leu	Leu	Leu	Pro	Cys	Leu	Lys	Ala	Cys	Ala	Pro	Ser	Arg	Val	155	160	165
Val	Val	Val	Ala	Ser	Ala	Ala	His	Cys	Arg	Gly	Arg	Leu	Asp	Phe	170	175	180
Lys	Arg	Leu	Asp	Arg	Pro	Val	Val	Gly	Trp	Arg	Gln	Glu	Leu	Arg	185	190	195
Ala	Tyr	Ala	Asp	Thr	Lys	Leu	Ala	Asn	Val	Leu	Phe	Ala	Arg	Glu	200	205	210
Leu	Ala	Asn	Gln	Leu	Glu	Ala	Thr	Gly	Val	Thr	Cys	Tyr	Ala	Ala	215	220	225
His	Pro	Gly	Pro	Val	Asn	Ser	Glu	Leu	Phe	Leu	Arg	His	Val	Pro	230	235	240
Gly	Trp	Leu	Arg	Pro	Leu	Leu	Arg	Pro	Leu	Ala	Trp	Leu	Val	Leu	245	250	255
Arg	Ala	Pro	Arg	Gly	Gly	Ala	Gln	Thr	Pro	Leu	Tyr	Cys	Ala	Leu	260	265	270
Gln	Glu	Gly	Ile	Glu	Pro	Leu	Ser	Gly	Arg	Tyr	Phe	Ala	Asn	Cys	275	280	285
His	Val	Glu	Glu	Val	Pro	Pro	Ala	Ala	Arg	Asp	Asp	Arg	Ala	Ala	290	295	300
His	Arg	Leu	Trp	Glu	Ala	Ser	Lys	Arg	Leu	Ala	Gly	Leu	Gly	Pro	305	310	315
Gly	Glu	Asp	Ala	Glu	Pro	Asp	Glu	Asp	Pro	Gln	Ser	Glu	Asp	Ser	320	325	330
Glu	Ala	Pro	Ser	Ser	Leu	Ser	Thr	Pro	His	Pro	Glu	Glu	Pro	Thr	335	340	345
Val	Ser	Gln	Pro	Tyr	Pro	Ser	Pro	Gln	Ser	Ser	Pro	Asp	Leu	Ser	350	355	360
Lys	Met	Thr	His	Arg	Ile	Gln	Ala	Lys	Val	Glu	Pro	Glu	Ile	Gln	365	370	375
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<220>

<223> Synthetic oligonucleotide probe

<400> 207

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<400> 208  
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<211> 985

<212> PRT

<213> Homo sapiens

<400> 211

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				20					25					30

Cys	Gln	Ala	Ser	Gly	Gln	Pro	Pro	Pro	Thr	Ile	Arg	Trp	Leu	Leu
				35					40					45

Asn	Gly	Gln	Pro	Leu	Ser	Met	Val	Pro	Pro	Asp	Pro	His	His	Leu
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Leu	Pro	Asp	Gly	Thr	Leu	Leu	Leu	Leu	Gln	Pro	Pro	Ala	Arg	Gly
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His	Ala	His	Asp	Gly	Gln	Ala	Leu	Ser	Thr	Asp	Leu	Gly	Val	Tyr
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Thr	Cys	Glu	Ala	Ser	Asn	Arg	Leu	Gly	Thr	Ala	Val	Ser	Arg	Gly
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Ala	Arg	Leu	Ser	Val	Ala	Val	Leu	Arg	Glu	Asp	Phe	Gln	Ile	Gln
				110					115					120

Pro	Arg	Asp	Met	Val	Ala	Val	Val	Gly	Glu	Gln	Phe	Thr	Leu	Glu
				125					130					135

Cys	Gly	Pro	Pro	Trp	Gly	His	Pro	Glu	Pro	Thr	Val	Ser	Trp	Trp
				140					145					150

Lys	Asp	Gly	Lys	Pro	Leu	Ala	Leu	Gln	Pro	Gly	Arg	His	Thr	Val
				155					160					165

Ser	Gly	Gly	Ser	Leu	Leu	Met	Ala	Arg	Ala	Glu	Lys	Ser	Asp	Glu
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Gly	Thr	Tyr	Met	Cys	Val	Ala	Thr	Asn	Ser	Ala	Gly	His	Arg	Glu
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Ser	Arg	Ala	Ala	Arg	Val	Ser	Ile	Gln	Glu	Pro	Gln	Asp	Tyr	Thr
				200					205					210

Glu	Pro	Val	Glu	Leu	Leu	Ala	Val	Arg	Ile	Gln	Leu	Glu	Asn	Val
				215					220					225

Thr	Leu	Leu	Asn	Pro	Asp	Pro	Ala	Glu	Gly	Pro	Lys	Pro	Arg	Pro
				230					235					240

Ala Val Trp Leu Ser Trp Lys Val Ser Gly Pro Ala Ala Pro Ala	245	250	255
Gln Ser Tyr Thr Ala Leu Phe Arg Thr Gln Thr Ala Pro Gly Gly	260	265	270
Gln Gly Ala Pro Trp Ala Glu Glu Leu Leu Ala Gly Trp Gln Ser	275	280	285
Ala Glu Leu Gly Gly Leu His Trp Gly Gln Asp Tyr Glu Phe Lys	290	295	300
Val Arg Pro Ser Ser Gly Arg Ala Arg Gly Pro Asp Ser Asn Val	305	310	315
Leu Leu Leu Arg Leu Pro Glu Lys Val Pro Ser Ala Pro Pro Gln	320	325	330
Glu Val Thr Leu Lys Pro Gly Asn Gly Thr Val Phe Val Ser Trp	335	340	345
Val Pro Pro Pro Ala Glu Asn His Asn Gly Ile Ile Arg Gly Tyr	350	355	360
Gln Val Trp Ser Leu Gly Asn Thr Ser Leu Pro Pro Ala Asn Trp	365	370	375
Thr Val Val Gly Glu Gln Thr Gln Leu Glu Ile Ala Thr His Met	380	385	390
Pro Gly Ser Tyr Cys Val Gln Val Ala Ala Val Thr Gly Ala Gly	395	400	405
Ala Gly Glu Pro Ser Arg Pro Val Cys Leu Leu Leu Glu Gln Ala	410	415	420
Met Glu Arg Ala Thr Gln Glu Pro Ser Glu His Gly Pro Trp Thr	425	430	435
Leu Glu Gln Leu Arg Ala Thr Leu Lys Arg Pro Glu Val Ile Ala	440	445	450
Thr Cys Gly Val Ala Leu Trp Leu Leu Leu Leu Gly Thr Ala Val	455	460	465
Cys Ile His Arg Arg Arg Arg Ala Arg Val His Leu Gly Pro Gly	470	475	480
Leu Tyr Arg Tyr Thr Ser Glu Asp Ala Ile Leu Lys His Arg Met	485	490	495
Asp His Ser Asp Ser Gln Trp Leu Ala Asp Thr Trp Arg Ser Thr	500	505	510
Ser Gly Ser Arg Asp Leu Ser Ser Ser Ser Ser Leu Ser Ser Arg	515	520	525
Leu Gly Ala Asp Ala Arg Asp Pro Leu Asp Cys Arg Arg Ser Leu			

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Leu	Ser	Trp	Asp	Ser	Arg	Ser	Pro	Gly	Val	Pro	Leu	Leu	Pro	Asp			
				545					550					555			
Thr	Ser	Thr	Phe	Tyr	Gly	Ser	Leu	Ile	Ala	Glu	Leu	Pro	Ser	Ser			
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Thr	Pro	Ala	Arg	Pro	Ser	Pro	Gln	Val	Pro	Ala	Val	Arg	Arg	Leu			
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Pro	Pro	Gln	Leu	Ala	Gln	Leu	Ser	Ser	Pro	Cys	Ser	Ser	Ser	Asp			
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Ser	Leu	Cys	Ser	Arg	Arg	Gly	Leu	Ser	Ser	Pro	Arg	Leu	Ser	Leu			
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Ala	Pro	Ala	Glu	Ala	Trp	Lys	Ala	Lys	Lys	Lys	Gln	Glu	Leu	Gln			
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His	Ala	Asn	Ser	Ser	Pro	Leu	Leu	Arg	Gly	Ser	His	Ser	Leu	Glu			
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Leu	Arg	Ala	Cys	Glu	Leu	Gly	Asn	Arg	Gly	Ser	Lys	Asn	Leu	Ser			
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Gln	Ser	Pro	Gly	Ala	Val	Pro	Gln	Ala	Leu	Val	Ala	Trp	Arg	Ala			
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Leu	Gly	Pro	Lys	Leu	Leu	Ser	Ser	Ser	Asn	Glu	Leu	Val	Thr	Arg			
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His	Leu	Pro	Pro	Ala	Pro	Leu	Phe	Pro	His	Glu	Thr	Pro	Pro	Thr			
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Gln	Ser	Gln	Gln	Thr	Gln	Pro	Pro	Val	Ala	Pro	Gln	Ala	Pro	Ser			
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Ser	Ile	Leu	Leu	Pro	Ala	Ala	Pro	Ile	Pro	Ile	Leu	Ser	Pro	Cys			
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Ala	Ser	Ser	Arg	Leu	Ser	Ser	Ser	Ser	Leu	Ser	Ser	Leu	Gly	Glu			
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Asp	Gln	Asp	Ser	Val	Leu	Thr	Pro	Glu	Glu	Val	Ala	Leu	Cys	Leu			
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Glu	Leu	Ser	Glu	Gly	Glu	Glu	Thr	Pro	Arg	Asn	Ser	Val	Ser	Pro			
				785					790					795			
Met	Pro	Arg	Ala	Pro	Ser	Pro	Pro	Thr	Thr	Tyr	Gly	Tyr	Ile	Ser			
				800					805					810			
Val	Pro	Thr	Ala	Ser	Glu	Phe	Thr	Asp	Met	Gly	Arg	Thr	Gly	Gly			
				815					820					825			

Gly Val Gly Pro	Lys Gly Gly Val Leu	Leu Cys Pro Pro Arg Pro	830	835	840
Cys Leu Thr Pro	Thr Pro Ser Glu Gly	Ser Leu Ala Asn Gly Trp	845	850	855
Gly Ser Ala Ser	Glu Asp Asn Ala Ala	Ser Ala Arg Ala Ser Leu	860	865	870
Val Ser Ser Ser	Asp Gly Ser Phe Leu	Ala Asp Ala His Phe Ala	875	880	885
Arg Ala Leu Ala	Val Ala Val Asp Ser	Phe Gly Phe Gly Leu Glu	890	895	900
Pro Arg Glu Ala	Asp Cys Val Phe Ile	Asp Ala Ser Ser Pro Pro	905	910	915
Ser Pro Arg Asp	Glu Ile Phe Leu Thr	Pro Asn Leu Ser Leu Pro	920	925	930
Leu Trp Glu Trp	Arg Pro Asp Trp Leu	Glu Asp Met Glu Val Ser	935	940	945
His Thr Gln Arg	Leu Gly Arg Gly Met	Pro Pro Trp Pro Pro Asp	950	955	960
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Lys Ala Gly Ala	Ser Pro Val Asp Tyr	Ser	980	985	

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<223> unknown base

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<212> PRT  
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35 40 45  
His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg  
50 55 60  
Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met  
65 70 75  
Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu  
80 85 90  
Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr  
95 100 105  
Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile  
110 115 120  
Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser  
125 130 135  
Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala  
140 145 150  
Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu  
155 160 165  
Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu  
170 175 180  
Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr  
185 190 195  
Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro

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				230					235					240			
Val	Ser	Ile	Pro	Met	Val	Arg	Ile	Leu	Ala	Pro	Val	Leu	Val	Leu			
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Leu	Ser	Leu	Leu	Ser	Ala	Ala	Gly	Leu	Ile	Ala	Phe	Cys	Ser	His			
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				290					295					300			
Glu	Ala	Pro	Ser	Gln	Ala	Pro	Glu	Gly	Asp	Val	Ile	Ser	Met	Pro			
				305					310					315			
Pro	Leu	His	Thr	Ser	Glu	Glu	Glu	Leu	Gly	Phe	Ser	Lys	Phe	Val			
				320					325					330			
Ser Ala																	

<210> 217  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 217  
 ccctgcagtg cacctacagg gaag 24

<210> 218  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 218  
 ctgtcttccc ctgcttggt gtgg 24

<210> 219  
 <211> 47  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 219  
ggtgcaggaa ggggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 220  
<211> 950  
<212> DNA  
<213> Homo sapiens

<400> 220  
ttgtgactaa aagctggcct agcaggccag ggagtgcagc tgcaggcgtg 50  
gggggtggcag gagccgcaga gccagagcag acagccgaga aacagggtgga 100  
cagtgtgaaa gaaccagtgg tctcgctctg ttgcccaggc tagagtgtac 150  
tggcgtgatc atagctcact gcagcctcag actcctggac ttgagaaatc 200  
ctcctgcctt agcctcctgc atatctggga ctccaggggt gcaactcaagc 250  
cctgtttctt ctcttctgt gagtggacca cggaggctgg tgagctgcct 300  
gtcatcccaa agctcagctc tgagccagag tgggtggtggc tccacctctg 350  
ccgccggcat agaagccagg agcagggctc tcagaaggcg gtggtgcca 400  
gctgggatca tgttgttggc cctggtctgt ctgctcagct gcctgctacc 450  
ctccagttag gccaagctct acggctggtg tgaactggcc agagtgtac 500  
atgacttcgg gctggacgga taccggggat acagcctggc tgactgggtc 550  
tgccttgctt atttcacaag cggtttcaac gcagctgctt tggactacga 600  
ggctgatggg agcaccaaca acgggatctt ccagatcaac agccggaggt 650  
ggtgcagcaa cctcaccctg aacgtcccca acgtgtgccg gatgtactgc 700  
tcagatttgt tgaatcctaa tctcaaggat accgttatct gtgccatgaa 750  
gataacccaa gagcctcagg gtctgggtta ctgggaggcc tggaggcatc 800  
actgccaggg aaaagacctc actgaatggg tggatggctg tgacttctag 850  
gatggacgga accatgcaca gcaggctggg aaatgtggtt tggttcctga 900  
cctaggcttg ggaagacaag ccagcgaata aaggatggtt gaacgtgaaa 950

<210> 221  
<211> 146  
<212> PRT  
<213> Homo sapiens

<400> 221  
Met Leu Leu Ala Leu Val Cys Leu Leu Ser Cys Leu Leu Pro Ser  
1 5 10 15  
Ser Glu Ala Lys Leu Tyr Gly Arg Cys Glu Leu Ala Arg Val Leu  
20 25 30

His	Asp	Phe	Gly	Leu	Asp	Gly	Tyr	Arg	Gly	Tyr	Ser	Leu	Ala	Asp	35	40	45
Trp	Val	Cys	Leu	Ala	Tyr	Phe	Thr	Ser	Gly	Phe	Asn	Ala	Ala	Ala	50	55	60
Leu	Asp	Tyr	Glu	Ala	Asp	Gly	Ser	Thr	Asn	Asn	Gly	Ile	Phe	Gln	65	70	75
Ile	Asn	Ser	Arg	Arg	Trp	Cys	Ser	Asn	Leu	Thr	Pro	Asn	Val	Pro	80	85	90
Asn	Val	Cys	Arg	Met	Tyr	Cys	Ser	Asp	Leu	Leu	Asn	Pro	Asn	Leu	95	100	105
Lys	Asp	Thr	Val	Ile	Cys	Ala	Met	Lys	Ile	Thr	Gln	Glu	Pro	Gln	110	115	120
Gly	Leu	Gly	Tyr	Trp	Glu	Ala	Trp	Arg	His	His	Cys	Gln	Gly	Lys	125	130	135
Asp	Leu	Thr	Glu	Trp	Val	Asp	Gly	Cys	Asp	Phe					140	145	

<210> 222

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 222

gggatcatgt tggtggccct ggtc 24

<210> 223

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 223

gcaaggcaga cccagtcagc cag 23

<210> 224

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 224

ctgcctgcta ccctccaagt gaggccaagc tctacggtcg ttgtg 45

<210> 225

<211> 2049  
<212> DNA  
<213> Homo sapiens

<400> 225

agccgctgcc ccggggccggg cgcccgcggc ggcaccatga gtccccgctc 50  
gtgcctgcgt tcgctgcgcc tctctgtctt cgccgtcttc tcagccgccg 100  
cgagcaactg gctgtacctg gccaaagtgt cgtcgggtggg gagcatctca 150  
gaggaggaga cgtgcgagaa actcaagggc ctgatccaga ggcaggtgca 200  
gatgtgcaag cggaacctgg aagtcattga ctcgggtgcgc cgcgggtgcc 250  
agctggccat tgaggagtgc cagtaccagt tccggaaccg gcgctggaac 300  
tgctccacac tcgactcctt gcccgctctt ggcaagggtg tgacgcaagg 350  
gactcgggag gcgcccttcg tgtacgccat ctcttcggca ggtgtggcct 400  
ttgcagtgc gggggcgtgc agcagtgggg agctggagaa gtgcggctgt 450  
gacaggacag tgcatggggg cagcccacag ggcttcaggt ggtcaggatg 500  
ctctgacaac atcgctacg gtgtggcctt ctacagtcg tttgtggatg 550  
tgccggagag aagcaagggg gctcgtcca gcagagccct catgaacctc 600  
cacaacaatg aggccggcag gaaggccatc ctgacacaca tgcgggtgga 650  
atgcaagtgc cacgggggtgt caggctcctg tgaggtaaag acgtgctggc 700  
gagccgtgcc gcccttcgc cagggtgggtc acgcactgaa ggagaagttt 750  
gatggtgcca ctgagggtgga gccacgccgc gtgggctcct ccagggcact 800  
ggtaccacgc aacgcacagt tcaagccgca cacagatgag gacctggtgt 850  
acttgagacc tagccccgac ttctgtgagc aggacatgcg cagcggcgtg 900  
ctgggcacga gggggccgcac atgcaacaag acgtccaagg ccatcgacgg 950  
ctgtgagctg ctgtgctgtg gccgcggctt ccacacggcg caggtggagc 1000  
tggtgaacg ctgcagctgc aaattccact ggtgctgctt cgtcaagtgc 1050  
cggcagtgcc agcggctcgt ggagttgcac acgtgccgat gaccgcctgc 1100  
ctagccctgc gccggcaacc acctagtggc ccagggaagg ccgataattt 1150  
aaacagtctc ccaccacctc cccaagaga tactggttgt attttttgtt 1200  
ctggtttggg ttttgggtcc tcatgttatt tattgccgaa accaggcagg 1250  
caacccaag ggcaccaacc agggcctccc caaagcctgg gcctttgtgg 1300  
ctgccactga ccaaagggac cttgctcgtg ccgctggctg cccgcatgtg 1350

gctgccactg accactcagt tggtatctgt gtccggtttt ctacttgcag 1400  
 acctaagggtg gagtaacaag gagtattacc accacatggc tactgaccgt 1450  
 gtcacgcggg aagagggggc cttatggcag ggaaaatagg taccgacttg 1500  
 atggaagtca caccctctgg aaaaaagaac tcttaactct ccagcacaca 1550  
 tacacatgga ctctggcag cttgagccta gaagccatgt ctctcaaagt 1600  
 ccctgagaaa gggaacaagc agataccagg tcaagggcac caggttcatt 1650  
 tcagccctta catggacagc tagaggttcg atatctgtgg gtccttccag 1700  
 gcaagaagag ggagatgaga gcaagagacg actgaagtcc caccctagaa 1750  
 cccagcctgc cccagcctgc ccctgggaag aggaaactta accactcccc 1800  
 agaccacact aggcaggcat ataggctgcc atcctggacc agggatcccc 1850  
 gctgtgcctt tgcagtcag cccgagtcac ctttcacagc gctgttcctc 1900  
 catgaaactg aaaaacacac acacacacac acacacacac acacacacac 1950  
 acacacacac ggacacacac acacacctgc gagagagagg gaggaagg 2000  
 ctgtgccttt gcagtcagc ccgagtcacc tttcacagca ctgttcctc 2049

<210> 226

<211> 351

<212> PRT

<213> Homo sapiens

<400> 226

Met	Ser	Pro	Arg	Ser	Cys	Leu	Arg	Ser	Leu	Arg	Leu	Leu	Val	Phe
1				5					10					15
Ala	Val	Phe	Ser	Ala	Ala	Ala	Ser	Asn	Trp	Leu	Tyr	Leu	Ala	Lys
				20					25					30
Leu	Ser	Ser	Val	Gly	Ser	Ile	Ser	Glu	Glu	Glu	Thr	Cys	Glu	Lys
				35					40					45
Leu	Lys	Gly	Leu	Ile	Gln	Arg	Gln	Val	Gln	Met	Cys	Lys	Arg	Asn
				50					55					60
Leu	Glu	Val	Met	Asp	Ser	Val	Arg	Arg	Gly	Ala	Gln	Leu	Ala	Ile
				65					70					75
Glu	Glu	Cys	Gln	Tyr	Gln	Phe	Arg	Asn	Arg	Arg	Trp	Asn	Cys	Ser
				80					85					90
Thr	Leu	Asp	Ser	Leu	Pro	Val	Phe	Gly	Lys	Val	Val	Thr	Gln	Gly
				95					100					105
Thr	Arg	Glu	Ala	Ala	Phe	Val	Tyr	Ala	Ile	Ser	Ser	Ala	Gly	Val
				110					115					120



Ala	Phe	Ala	Val	Thr	Arg	Ala	Cys	Ser	Ser	Gly	Glu	Leu	Glu	Lys	125	130	135
Cys	Gly	Cys	Asp	Arg	Thr	Val	His	Gly	Val	Ser	Pro	Gln	Gly	Phe	140	145	150
Gln	Trp	Ser	Gly	Cys	Ser	Asp	Asn	Ile	Ala	Tyr	Gly	Val	Ala	Phe	155	160	165
Ser	Gln	Ser	Phe	Val	Asp	Val	Arg	Glu	Arg	Ser	Lys	Gly	Ala	Ser	170	175	180
Ser	Ser	Arg	Ala	Leu	Met	Asn	Leu	His	Asn	Asn	Glu	Ala	Gly	Arg	185	190	195
Lys	Ala	Ile	Leu	Thr	His	Met	Arg	Val	Glu	Cys	Lys	Cys	His	Gly	200	205	210
Val	Ser	Gly	Ser	Cys	Glu	Val	Lys	Thr	Cys	Trp	Arg	Ala	Val	Pro	215	220	225
Pro	Phe	Arg	Gln	Val	Gly	His	Ala	Leu	Lys	Glu	Lys	Phe	Asp	Gly	230	235	240
Ala	Thr	Glu	Val	Glu	Pro	Arg	Arg	Val	Gly	Ser	Ser	Arg	Ala	Leu	245	250	255
Val	Pro	Arg	Asn	Ala	Gln	Phe	Lys	Pro	His	Thr	Asp	Glu	Asp	Leu	260	265	270
Val	Tyr	Leu	Glu	Pro	Ser	Pro	Asp	Phe	Cys	Glu	Gln	Asp	Met	Arg	275	280	285
Ser	Gly	Val	Leu	Gly	Thr	Arg	Gly	Arg	Thr	Cys	Asn	Lys	Thr	Ser	290	295	300
Lys	Ala	Ile	Asp	Gly	Cys	Glu	Leu	Leu	Cys	Cys	Gly	Arg	Gly	Phe	305	310	315
His	Thr	Ala	Gln	Val	Glu	Leu	Ala	Glu	Arg	Cys	Ser	Cys	Lys	Phe	320	325	330
His	Trp	Cys	Cys	Phe	Val	Lys	Cys	Arg	Gln	Cys	Gln	Arg	Leu	Val	335	340	345
Glu	Leu	His	Thr	Cys	Arg										350		

<210> 227

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 227

gctgcagctg caaattccac tgg 23

<210> 228  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 228  
tgggtgggaga ctgttttaaatt tatcggcc 28

<210> 229  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 229  
tgcttcgtca agtgccggca gtgccagcgg ctcgtggagt t 41

<210> 230  
<211> 1355  
<212> DNA  
<213> Homo sapiens

<400> 230  
cggacgcgtg ggccggacgcg tgggcccggacg cgtgggcccga cgcgtgggct 50  
gggtgcctgc atcgccatgg acaccaccag gtacagcaag tggggccggca 100  
gctccgagga ggtccccgga gggccctggg gacgctgggt gcactggagc 150  
aggagacccc tcttcttggc cctggctgtc ctggtcacca cagtcctttg 200  
ggctgtgatt ctgagtatcc tattgtccaa ggcctccacg gagcgcgcgg 250  
cgctgcttga cggccacgac ctgctgagga caaacgcctc gaagcagacg 300  
gcgccgctgg gtgccctgaa ggaggaggctc ggagactgcc acagctgctg 350  
ctcggggacg caggcgcagc tgcagaccac gcgcgcggag cttggggagg 400  
cgcaggcgaa gctgatggag caggagagcg ccttgcggga actgcgtgag 450  
cgcgtgaccc agggcttggc tgaagccggc aggggcccgtg aggacgtccg 500  
cactgagctg ttccggggcg tggaggccgt gaggctccag aacaactcct 550  
gcgagccgtg cccacgctc tggctgtcct tcgagggctc ctgctacttt 600  
ttctctgtgc caaagacgac gtgggcccgg gcgcaggatc actgcgcaga 650  
tgccagcgcg cacctggtga tcgttggggg cctggatgag cagggttcc 700  
tcactcgga cagcgtggc cgtggttact ggctgggcct gagggctgtg 750

cgccatctgg gcaaggttca gggctaccag tgggtggacg gagtctctct 800  
cagcttcagc cactggaacc agggagagcc caatgacgct tgggggcgcg 850  
agaactgtgt catgatgctg cacacggggc tgtggaacga cgcaccgtgt 900  
gacagcgaga aggacggctg gatctgtgag aaaaggcaca actgctgacc 950  
ccgcccagtg ccctggagcc gcgcccattg cagcatgtcg tatcctgggg 1000  
gctgctcacc tccctggctc ctggagctga ttgccaaaga gtttttttct 1050  
tcctcatcca ccgctgctga gtctcagaaa cacttggtccc aacatagccc 1100  
tgtccagccc agtgcctggg ctctgggacc tccatgccga cctcatccta 1150  
actccactca cgcagacca acctaacctc cactagctcc aaaatccctg 1200  
ctctcgctc cccgtgatat gcctccactt ctctccctaa ccaaggttag 1250  
gtgactgagg actggagctg tttggttttc tcgcattttc caccaaactg 1300  
gaagctgttt ttgcagcctg aggaagcatc aataaatatt tgagaaatga 1350  
aaaaa 1355

<210> 231  
<211> 293  
<212> PRT  
<213> Homo sapiens

<400> 231  
Met Asp Thr Thr Arg Tyr Ser Lys Trp Gly Gly Ser Ser Glu Glu  
1 5 10 15  
Val Pro Gly Gly Pro Trp Gly Arg Trp Val His Trp Ser Arg Arg  
20 25 30  
Pro Leu Phe Leu Ala Leu Ala Val Leu Val Thr Thr Val Leu Trp  
35 40 45  
Ala Val Ile Leu Ser Ile Leu Leu Ser Lys Ala Ser Thr Glu Arg  
50 55 60  
Ala Ala Leu Leu Asp Gly His Asp Leu Leu Arg Thr Asn Ala Ser  
65 70 75  
Lys Gln Thr Ala Ala Leu Gly Ala Leu Lys Glu Glu Val Gly Asp  
80 85 90  
Cys His Ser Cys Cys Ser Gly Thr Gln Ala Gln Leu Gln Thr Thr  
95 100 105  
Arg Ala Glu Leu Gly Glu Ala Gln Ala Lys Leu Met Glu Gln Glu  
110 115 120  
Ser Ala Leu Arg Glu Leu Arg Glu Arg Val Thr Gln Gly Leu Ala  
125 130 135

Glu	Ala	Gly	Arg	Gly	Arg	Glu	Asp	Val	Arg	Thr	Glu	Leu	Phe	Arg	
				140					145					150	
Ala	Leu	Glu	Ala	Val	Arg	Leu	Gln	Asn	Asn	Ser	Cys	Glu	Pro	Cys	
				155					160					165	
Pro	Thr	Ser	Trp	Leu	Ser	Phe	Glu	Gly	Ser	Cys	Tyr	Phe	Phe	Ser	
				170					175					180	
Val	Pro	Lys	Thr	Thr	Trp	Ala	Ala	Ala	Gln	Asp	His	Cys	Ala	Asp	
				185					190					195	
Ala	Ser	Ala	His	Leu	Val	Ile	Val	Gly	Gly	Leu	Asp	Glu	Gln	Gly	
				200					205					210	
Phe	Leu	Thr	Arg	Asn	Thr	Arg	Gly	Arg	Gly	Tyr	Trp	Leu	Gly	Leu	
				215					220					225	
Arg	Ala	Val	Arg	His	Leu	Gly	Lys	Val	Gln	Gly	Tyr	Gln	Trp	Val	
				230					235					240	
Asp	Gly	Val	Ser	Leu	Ser	Phe	Ser	His	Trp	Asn	Gln	Gly	Glu	Pro	
				245					250					255	
Asn	Asp	Ala	Trp	Gly	Arg	Glu	Asn	Cys	Val	Met	Met	Leu	His	Thr	
				260					265					270	
Gly	Leu	Trp	Asn	Asp	Ala	Pro	Cys	Asp	Ser	Glu	Lys	Asp	Gly	Trp	
				275					280					285	
Ile	Cys	Glu	Lys	Arg	His	Asn	Cys								
				290											

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

gcgagaactg tgtcatgatg ctgc 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 233

gtttctgaga ctcagcagcg gtgg 24

<210> 234

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 234

caccgtgtga cagcgagaag gacggctgga tctgtgagaa aaggcacaac 50

<210> 235

<211> 1847

<212> DNA

<213> Homo sapiens

<400> 235

gccaggggaa gaggggtgatc cgacccgggg aaggtcgctg ggcagggcga 50

gttgggaaag cggcagcccc cgccgcccc gcagcccctt ctctccttt 100

ctcccacgtc ctatctgect ctcgctggag gccaggccgt gcagcatcga 150

agacaggagg aactggagcc tcattggccg gcccggggcg ccggcctcgg 200

gcttaaataag gagctccggg ctctggctgg gacccgaccg ctgccggccg 250

cgctcccgt gctcctgccg ggtgatggaa aaccccagcc cggccgccgc 300

cctgggcaag gccctctgcg ctctcctcct ggccactctc ggccgccgcg 350

gccagcctct tgggggagag tccatctgtt ccgccagagc cccggccaaa 400

tacagcatca ccttcacggg caagtggagc cagacggcct tccccaagca 450

gtaccccctg ttccgcccc ctgcgcagtg gtcttcgctg ctgggggccc 500

cgcatagtc cgactacagc atgtggagga agaaccagta cgtcagtaac 550

gggctgcgcg actttgcgga gcgcggcgag gcctgggcgc tgatgaagga 600

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cagcgcaggc actcgttggt ctcgtttggt gtgcgcacgtg tgcccagccc 750

cgactggttc gtgggcgtgg acagcctgga cctgtgcgac ggggaccgtt 800

ggcgggaaca ggcggcgctg gacctgtacc cctacgacgc cgggacggac 850

agcggcttca ccttctctc ccccaacttc gccaccatcc cgcaggacac 900

ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950

actacccgcg gctgaaggcc ctgcctccca tcgccagggt gacactgctg 1000

cggctgcgac agagccccag ggccttcac cctcccgccc cagtccctgcc 1050

cagcagggac aatgagattg tagacagcgc ctcaattcca gaaacgccgc 1100

tggactgcga ggtctccctg tggctcgtcct ggggactgtg cggaggccac 1150  
 tgtggggaggc tggggaccaa gagcaggact cgctacgtcc ggggccagcc 1200  
 cgccaacaac gggagcccct gccccgagct cgaagaagag gctgagtgcg 1250  
 tccctgataa ctgcgtctaa gaccagagcc ccgcagcccc tggggccccc 1300  
 cggagccatg ggggtgtcggg ggctcctgtg caggctcatg ctgcaggcgg 1350  
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 cgaccatctc tgcactgaag ggccctctgg tggccggcac gggcattggg 1450  
 aaacagcctc ctcccttccc aaccttgctt cttagggggc cccgtgtccc 1500  
 gtctgtctc agcctcctcc tctgcagga taaagtcac cccaaggctc 1550  
 cagctactct aaattatgtc tcttataag ttattgctgc tccaggagat 1600  
 tgtccttcat cgtccagggg cctggctccc acgtggttgc agatacctca 1650  
 gacctggtgc tctaggctgt gctgagccca ctctcccag ggcgcatcca 1700  
 agcggggggc acttgagaag tgaataaatg gggcggtttc ggaagcgtca 1750  
 gtgtttccat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800  
 tgctcacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1847

<210> 236

<211> 331

<212> PRT

<213> Homo sapiens

<400> 236

Met	Glu	Asn	Pro	Ser	Pro	Ala	Ala	Ala	Leu	Gly	Lys	Ala	Leu	Cys
1				5					10					15
Ala	Leu	Leu	Leu	Ala	Thr	Leu	Gly	Ala	Ala	Gly	Gln	Pro	Leu	Gly
				20					25					30
Gly	Glu	Ser	Ile	Cys	Ser	Ala	Arg	Ala	Pro	Ala	Lys	Tyr	Ser	Ile
				35					40					45
Thr	Phe	Thr	Gly	Lys	Trp	Ser	Gln	Thr	Ala	Phe	Pro	Lys	Gln	Tyr
				50					55					60
Pro	Leu	Phe	Arg	Pro	Pro	Ala	Gln	Trp	Ser	Ser	Leu	Leu	Gly	Ala
				65					70					75
Ala	His	Ser	Ser	Asp	Tyr	Ser	Met	Trp	Arg	Lys	Asn	Gln	Tyr	Val
				80					85					90
Ser	Asn	Gly	Leu	Arg	Asp	Phe	Ala	Glu	Arg	Gly	Glu	Ala	Trp	Ala
				95					100					105
Leu	Met	Lys	Glu	Ile	Glu	Ala	Ala	Gly	Glu	Ala	Leu	Gln	Ser	Val

110					115					120				
His	Glu	Val	Phe	Ser	Ala	Pro	Ala	Val	Pro	Ser	Gly	Thr	Gly	Gln
				125					130					135
Thr	Ser	Ala	Glu	Leu	Glu	Val	Gln	Arg	Arg	His	Ser	Leu	Val	Ser
				140					145					150
Phe	Val	Val	Arg	Ile	Val	Pro	Ser	Pro	Asp	Trp	Phe	Val	Gly	Val
				155					160					165
Asp	Ser	Leu	Asp	Leu	Cys	Asp	Gly	Asp	Arg	Trp	Arg	Glu	Gln	Ala
				170					175					180
Ala	Leu	Asp	Leu	Tyr	Pro	Tyr	Asp	Ala	Gly	Thr	Asp	Ser	Gly	Phe
				185					190					195
Thr	Phe	Ser	Ser	Pro	Asn	Phe	Ala	Thr	Ile	Pro	Gln	Asp	Thr	Val
				200					205					210
Thr	Glu	Ile	Thr	Ser	Ser	Ser	Pro	Ser	His	Pro	Ala	Asn	Ser	Phe
				215					220					225
Tyr	Tyr	Pro	Arg	Leu	Lys	Ala	Leu	Pro	Pro	Ile	Ala	Arg	Val	Thr
				230					235					240
Leu	Leu	Arg	Leu	Arg	Gln	Ser	Pro	Arg	Ala	Phe	Ile	Pro	Pro	Ala
				245					250					255
Pro	Val	Leu	Pro	Ser	Arg	Asp	Asn	Glu	Ile	Val	Asp	Ser	Ala	Ser
				260					265					270
Val	Pro	Glu	Thr	Pro	Leu	Asp	Cys	Glu	Val	Ser	Leu	Trp	Ser	Ser
				275					280					285
Trp	Gly	Leu	Cys	Gly	Gly	His	Cys	Gly	Arg	Leu	Gly	Thr	Lys	Ser
				290					295					300
Arg	Thr	Arg	Tyr	Val	Arg	Val	Gln	Pro	Ala	Asn	Asn	Gly	Ser	Pro
				305					310					315
Cys	Pro	Glu	Leu	Glu	Glu	Glu	Ala	Glu	Cys	Val	Pro	Asp	Asn	Cys
				320					325					330

Val

<210> 237

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

cagcactgcc aggggaagag gg 22

<210> 238  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 238  
 caggactcgc tacgtccg 18  
  
 <210> 239  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 239  
 cagcccttc tctctcttcc tccc 24  
  
 <210> 240  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 240  
 gcagttatca gggacgcact cagcc 25  
  
 <210> 241  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Synthetic oligonucleotide probe  
  
 <400> 241  
 ccagcgagag gcagatag 18  
  
 <210> 242  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 242  
 cggtcacccgt gtcctgcggg atg 23  
  
 <210> 243  
 <211> 42  
 <212> DNA



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 243

cagcccccttc tctccttttc tcccacgtcc tatctgcctc tc 42

<210> 244

<211> 1894

<212> DNA

<213> Homo sapiens

<400> 244

ggcggcgtcc gtgaggggct cctttgggca ggggtagtgt ttggtgtccc 50  
tgtcttgctg gatattgaca aactgaagct ttcctgcacc actggactta 100  
aggaagagtg tactcgtagg cggacagctt tagtggccgg ccggccgctc 150  
tcatcccccg taaggagcag agtcctttgt actgaccaag atgagcaaca 200  
tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca 250  
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg 300  
cagaaatttt atccaacttt gtttggaagc ttattatgac aataccattt 350  
ttcatagagt tgtgcctggg ttcatagtcc aaggcggaga tctactggc 400  
acaggaggatg gtggagagtc tatctatgga gcgccattca aagatgaatt 450  
tcattcacgg ttgcgtttta atcggagagg actggttgcc atggcaaattg 500  
ctggtttctca tgataatggc agccagtttt tcttcacact gggtcgagca 550  
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gaccacataa tccacacaaa ataaaaagct gtgagggttt gtttaatcct 700  
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tactttcatt tggagaggaa gctgaggaag aagaggagga agtaaatacga 850  
gttagtcaga gcatgaaggg caaaagcaaa agtagtcatg acttgcttaa 900  
ggatgatcca catctcagtt ctgttccagt tgtagaaagt gaaaaagggtg 950  
atgcaccaga tttagttgat gatggagaag atgaaagtgc agagcatgat 1000  
gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgccaa 1050  
aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag 1100

aagtggagaa gaaatcagtc agccgcagtg aagagctcag aaaagaagca 1150  
agacaattaa aacgggaact cttagcagca aaacaaaaaa aagtagaaaa 1200  
tgcagcaaaa caagcagaaa aaagaagtga agaggaagaa gcccctccag 1250  
atggtgctgt tgccgaatac agaagagaaa agcaaaagta tgaagctttg 1300  
aggaagcaac agtcaaagaa gggaacttcc cgggaagatc agacccttgc 1350  
actgctgaac cagtttaaat ctaaactcac tcaagcaatt gctgaaacac 1400  
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ataaaagaag gagggaagaa agcaaaaagc tgatgagaga gaaaaaagaa 1600  
agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct 1650  
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gaaaagaagt atttttgaac ctgttgctctg gttttgaaaa acaattatct 1750  
tgttttgcaa attgtggaat gatgtaagca aatgcttttg gttactggta 1800  
catgtgtttt ttcctagctg accttttata ttgctaaatc tgaaataaaa 1850  
taactttcct tccacaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1894

<210> 245

<211> 472

<212> PRT

<213> Homo sapiens

<400> 245

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Leu	Leu	Lys	Thr	Thr	Ala	Gly	Asp	Ile	Asp	Ile	Glu	Leu	Trp	Ser
			20						25					30
Lys	Glu	Ala	Pro	Lys	Ala	Cys	Arg	Asn	Phe	Ile	Gln	Leu	Cys	Leu
			35						40					45
Glu	Ala	Tyr	Tyr	Asp	Asn	Thr	Ile	Phe	His	Arg	Val	Val	Pro	Gly
			50						55					60
Phe	Ile	Val	Gln	Gly	Gly	Asp	Pro	Thr	Gly	Thr	Gly	Ser	Gly	Gly
			65						70					75
Glu	Ser	Ile	Tyr	Gly	Ala	Pro	Phe	Lys	Asp	Glu	Phe	His	Ser	Arg
			80						85					90
Leu	Arg	Phe	Asn	Arg	Arg	Gly	Leu	Val	Ala	Met	Ala	Asn	Ala	Gly
			95						100					105

Ser	His	Asp	Asn	Gly	Ser	Gln	Phe	Phe	Phe	Thr	Leu	Gly	Arg	Ala	
				110					115					120	
Asp	Glu	Leu	Asn	Asn	Lys	His	Thr	Ile	Phe	Gly	Lys	Val	Thr	Gly	
				125					130					135	
Asp	Thr	Val	Tyr	Asn	Met	Leu	Arg	Leu	Ser	Glu	Val	Asp	Ile	Asp	
				140					145					150	
Asp	Asp	Glu	Arg	Pro	His	Asn	Pro	His	Lys	Ile	Lys	Ser	Cys	Glu	
				155					160					165	
Val	Leu	Phe	Asn	Pro	Phe	Asp	Asp	Ile	Ile	Pro	Arg	Glu	Ile	Lys	
				170					175					180	
Arg	Leu	Lys	Lys	Glu	Lys	Pro	Glu	Glu	Glu	Val	Lys	Lys	Leu	Lys	
				185					190					195	
Pro	Lys	Gly	Thr	Lys	Asn	Phe	Ser	Leu	Leu	Ser	Phe	Gly	Glu	Glu	
				200					205					210	
Ala	Glu	Glu	Glu	Glu	Glu	Glu	Val	Asn	Arg	Val	Ser	Gln	Ser	Met	
				215					220					225	
Lys	Gly	Lys	Ser	Lys	Ser	Ser	His	Asp	Leu	Leu	Lys	Asp	Asp	Pro	
				230					235					240	
His	Leu	Ser	Ser	Val	Pro	Val	Val	Glu	Ser	Glu	Lys	Gly	Asp	Ala	
				245					250					255	
Pro	Asp	Leu	Val	Asp	Asp	Gly	Glu	Asp	Glu	Ser	Ala	Glu	His	Asp	
				260					265					270	
Glu	Tyr	Ile	Asp	Gly	Asp	Glu	Lys	Asn	Leu	Met	Arg	Glu	Arg	Ile	
				275					280					285	
Ala	Lys	Lys	Leu	Lys	Lys	Asp	Thr	Ser	Ala	Asn	Val	Lys	Ser	Ala	
				290					295					300	
Gly	Glu	Gly	Glu	Val	Glu	Lys	Lys	Ser	Val	Ser	Arg	Ser	Glu	Glu	
				305					310					315	
Leu	Arg	Lys	Glu	Ala	Arg	Gln	Leu	Lys	Arg	Glu	Leu	Leu	Ala	Ala	
				320					325					330	
Lys	Gln	Lys	Lys	Val	Glu	Asn	Ala	Ala	Lys	Gln	Ala	Glu	Lys	Arg	
				335					340					345	
Ser	Glu	Glu	Glu	Glu	Ala	Pro	Pro	Asp	Gly	Ala	Val	Ala	Glu	Tyr	
				350					355					360	
Arg	Arg	Glu	Lys	Gln	Lys	Tyr	Glu	Ala	Leu	Arg	Lys	Gln	Gln	Ser	
				365					370					375	
Lys	Lys	Gly	Thr	Ser	Arg	Glu	Asp	Gln	Thr	Leu	Ala	Leu	Leu	Asn	
				380					385					390	
Gln	Phe	Lys	Ser	Lys	Leu	Thr	Gln	Ala	Ile	Ala	Glu	Thr	Pro	Glu	

395	400	405
Asn Asp Ile Pro Glu Thr Glu Val Glu	Asp Asp Glu Gly Trp Met	
410	415	420
Ser His Val Leu Gln Phe Glu Asp Lys	Ser Arg Lys Val Lys Asp	
425	430	435
Ala Ser Met Gln Asp Ser Asp Thr Phe	Glu Ile Tyr Asp Pro Arg	
440	445	450
Asn Pro Val Asn Lys Arg Arg Arg Glu	Glu Ser Lys Lys Leu Met	
455	460	465
Arg Glu Lys Lys Glu Arg Arg		
470		

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 <223> Synthetic oligonucleotide probe

<400> 246  
 tgcggagatc ctactggcac aggg 24

<210> 247  
 <211> 18  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 247  
 cgagtttagtc agagcatg 18

<210> 248  
 <211> 18  
 <212> DNA  
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<220>  
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<400> 248  
 cagatgggtgc tggtgccg 18

<210> 249  
 <211> 29  
 <212> DNA  
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<220>  
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<400> 249  
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<210> 250  
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<220>  
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<400> 250  
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<210> 251  
 <211> 18  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 251  
 cctctccgat taaaacgc 18

<210> 252  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 252  
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<210> 253  
 <211> 2456  
 <212> DNA  
 <213> Homo sapiens

<400> 253  
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 gatgctgccc ggcccgcctc ggctttgagg cgagagaagt gtcccagacc 100  
 catttcgctt tgctgacggc gtgcagccct ggccagacat gtccacaggg 150  
 ttctccttcg ggtccgggac tctgggctcc accaccgtgg ccgcccggcg 200  
 gaccagcaca ggcggcgctt tctccttcgg aacgggaacg tctagcaacc 250  
 cttctgtggg gctcaatttt ggaaatcttg gaagtacttc aactccagca 300  
 actacatctg ctcttcaag tggttttgga accgggctct ttggatctaa 350  
 acctgccact gggttcactc taggaggaac aaatacaggt gccttgca 400

ccaagaggcc tcaagtggtc accaaatatg gaaccctgca aggaaaacag 450  
 atgcatgtgg ggaagacacc catccaagtc tttttaggag tccccttctc 500  
 cagacctcct ctaggtatcc tcaggtttgc acctccagaa cccccggagc 550  
 cctggaaagg aatcagagat gctaccacct acccgcttgg atggagtctc 600  
 gctctgtcgc caggctggag tgcagtggca cgatctcggc tcaactgcaac 650  
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 ttattcagac ttttcatcac tagtaaccca ctgaaagtgg ccaagaagg 1250  
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 aaaaaa 2456

<210> 254  
 <211> 545  
 <212> PRT  
 <213> Homo sapiens

<400> 254

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Gly	Thr	Gly	Thr	Ser	Ser	Asn	Pro	Ser	Val	Gly	Leu	Asn	Phe	Gly	35	40	45	
Asn	Leu	Gly	Ser	Thr	Ser	Thr	Pro	Ala	Thr	Thr	Ser	Ala	Pro	Ser	50	55	60	
Ser	Gly	Phe	Gly	Thr	Gly	Leu	Phe	Gly	Ser	Lys	Pro	Ala	Thr	Gly	65	70	75	
Phe	Thr	Leu	Gly	Gly	Thr	Asn	Thr	Gly	Ala	Leu	His	Thr	Lys	Arg	80	85	90	
Pro	Gln	Val	Val	Thr	Lys	Tyr	Gly	Thr	Leu	Gln	Gly	Lys	Gln	Met	95	100	105	
His	Val	Gly	Lys	Thr	Pro	Ile	Gln	Val	Phe	Leu	Gly	Val	Pro	Phe	110	115	120	
Ser	Arg	Pro	Pro	Leu	Gly	Ile	Leu	Arg	Phe	Ala	Pro	Pro	Glu	Pro	125	130	135	

Pro	Glu	Pro	Trp	Lys	Gly	Ile	Arg	Asp	Ala	Thr	Thr	Tyr	Pro	Pro	140	145	150
Gly	Trp	Ser	Leu	Ala	Leu	Ser	Pro	Gly	Trp	Ser	Ala	Val	Ala	Arg	155	160	165
Ser	Arg	Leu	Thr	Ala	Thr	Ser	Ala	Ser	Arg	Val	Gln	Ala	Ser	Leu	170	175	180
Leu	Pro	Gln	Pro	Leu	Ser	Val	Trp	Gly	Tyr	Arg	Cys	Leu	Gln	Glu	185	190	195
Ser	Trp	Gly	Gln	Leu	Ala	Ser	Met	Tyr	Val	Ser	Thr	Arg	Glu	Arg	200	205	210
Tyr	Lys	Trp	Leu	Arg	Phe	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Val	215	220	225
Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp	Pro	Gln	Leu	Pro	Val	Met	230	235	240
Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val	Gly	Ala	Ala	Ser	Ser	245	250	255
Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Glu	Lys	Val	Val	Leu	Val	260	265	270
Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu	Ser	Thr	Asp	275	280	285
Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly	Leu	Leu	Asp	Gln	Met	Ala	290	295	300
Ala	Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	305	310	315
Pro	Gly	Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala	Gly	Ala	Met	Ser	320	325	330
Ile	Ser	Gly	Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly	Leu	Phe	His	335	340	345
Arg	Ala	Ile	Ser	Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu	Phe	Ile	350	355	360
Thr	Ser	Asn	Pro	Leu	Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu	Ala	365	370	375
Gly	Cys	Asn	His	Asn	Ser	Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg	380	385	390
Ala	Leu	Ser	Gly	Thr	Lys	Val	Met	Arg	Val	Ser	Asn	Lys	Met	Arg	395	400	405
Phe	Leu	Gln	Leu	Asn	Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	410	415	420
Ser	Met	Ser	Pro	Val	Val	Asp	Gly	Val	Val	Ile	Pro	Asp	Asp	Pro			



425	430	435
Leu Val Leu Leu Thr Gln Gly Lys Val	Ser Ser Val Pro Tyr	Leu
440	445	450
Leu Gly Val Asn Asn Leu Glu Phe Asn	Trp Leu Leu Pro Tyr	Asn
455	460	465
Ile Thr Lys Glu Gln Val Pro Leu Val	Val Glu Glu Tyr Leu	Asp
470	475	480
Asn Val Asn Glu His Asp Trp Lys Met	Leu Arg Asn Arg Met	Met
485	490	495
Asp Ile Val Gln Asp Ala Thr Phe Val	Tyr Ala Thr Leu Gln Thr	
500	505	510
Ala His Tyr His Arg Glu Thr Pro Met	Met Gly Ile Cys Pro	Ala
515	520	525
Gly His Ala Thr Thr Arg Met Lys Ser	Thr Cys Ser Trp Ile	Leu
530	535	540
Pro Gln Glu Trp Ala		
545		

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<220>  
 <223> Synthetic oligonucleotide probe

<400> 255  
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<210> 256  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 256  
 ccacctcagg aagccgaaga tgcc 24

<210> 257  
 <211> 45  
 <212> DNA  
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<220>  
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<400> 257  
 gaacggtaca agtggctgcg cttcagcgag gactgtctgt acctg 45

<210> 258  
<211> 2764  
<212> DNA  
<213> Homo sapiens

<400> 258  
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ggagattctg gatacgagtg caggagtcag tgatggtgcc ggagggcctg 150  
tgcattcttg tgcctgtctc tttctctac ccccgacaag actggacagg 200  
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cttggatgat agagacgcgc agatgcagga tgagtcacag tacttctttc 400  
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caccgacctc acctgccatg tggacttctc cagaaagggt gtgagcgcac 550  
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aatcggcatc acggtctctc ttttctctg cctggccctg atcatcatga 1300

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 cccctgggt cagaagcggga atcagaaagc cacaccaaac agtcctegga 1450  
 cccctcctcc accaggtgct ccctccccag aatcaaagaa gaaccagaaa 1500  
 aagcagtatc agttgccag tttcccagaa cccaaatcat cactcaagc 1550  
 ccagaatcc caggagagcc aagaggagct ccattatgcc acgctcaact 1600  
 tcccaggcgt cagaccagg cctgaggccc ggatgccaa gggcaccag 1650  
 gcggattatg cagaagtcaa gttccaatga gggctctctta ggctttagga 1700  
 ctgggacttc ggctagggag gaaggtagag taagaggttg aagataacag 1750  
 agtgcaaagt ttccttctct ccctctctct ctctctttct ctctctctct 1800  
 ctctttctct ctcttttaaa aaaacatctg gccagggcac agtggctcac 1850  
 gcctgtaatc ccagcacttt gggaggttga ggtgggcaga tcgcctgagg 1900  
 tcgggagttc gagaccagcc tggccaactt ggtgaaaccc cgtctctact 1950  
 aaaaatacaa aaattagctg ggcattggtg caggcgctg taatcctacc 2000  
 tacttgggaa gctgaggcag gagaatcact tgaacctggg agacggaggt 2050  
 tgcaagtgagc caagatcaca ccattgcacg ccagcctggg caacaaagcg 2100  
 agactccatc tcaaaaaaaaa aatcctccaa atgggttggg tgtctgtaat 2150  
 ccagcactt tgggaggcta aggtgggtgg attgcttgag ccaggaggt 2200  
 cgagaccagc ctgggcaaca tggtgaaacc ccattctctac aaaaaataca 2250  
 aaacatagct gggcttggtg gtgtgtgcct gtagtcccag ctgtcagaca 2300  
 tttaaaccag agcaactcca tctggaatag gagctgaata aatgagggt 2350  
 gagacctact gggctgcatt ctcagacagt ggaggcattc taagtcacag 2400  
 gatgagacag gaggtccgta caagatacag gtcataaaga ctttgctgat 2450  
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 gccacgagag tgacctctgg tcgtcctcac tgctacactc ctgacagcac 2550  
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 cccaaaaggg ggaggaatga ataatccacc ccttgtttag caaataagca 2650  
 agaaataacc ataaaagtgg gcaaccagca gctctaggcg ctgctcttgt 2700  
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tcaccttaaa aaaa 2764

<210> 259

<211> 544

<212> PRT

<213> Homo sapiens

<400> 259

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Ala	Met	Asp	Gly	Arg	Phe	Trp	Ile	Arg	Val	Gln	Glu	Ser	Val	Met
				20					25					30
Val	Pro	Glu	Gly	Leu	Cys	Ile	Ser	Val	Pro	Cys	Ser	Phe	Ser	Tyr
				35					40					45
Pro	Arg	Gln	Asp	Trp	Thr	Gly	Ser	Thr	Pro	Ala	Tyr	Gly	Tyr	Trp
				50					55					60
Phe	Lys	Ala	Val	Thr	Glu	Thr	Thr	Lys	Gly	Ala	Pro	Val	Ala	Thr
				65					70					75
Asn	His	Gln	Ser	Arg	Glu	Val	Glu	Met	Ser	Thr	Arg	Gly	Arg	Phe
				80					85					90
Gln	Leu	Thr	Gly	Asp	Pro	Ala	Lys	Gly	Asn	Cys	Ser	Leu	Val	Ile
				95					100					105
Arg	Asp	Ala	Gln	Met	Gln	Asp	Glu	Ser	Gln	Tyr	Phe	Phe	Arg	Val
				110					115					120
Glu	Arg	Gly	Ser	Tyr	Val	Thr	Tyr	Asn	Phe	Met	Asn	Asp	Gly	Phe
				125					130					135
Phe	Leu	Lys	Val	Thr	Val	Leu	Ser	Phe	Thr	Pro	Arg	Pro	Gln	Asp
				140					145					150
His	Asn	Thr	Asp	Leu	Thr	Cys	His	Val	Asp	Phe	Ser	Arg	Lys	Gly
				155					160					165
Val	Ser	Ala	Gln	Arg	Thr	Val	Arg	Leu	Arg	Val	Ala	Tyr	Ala	Pro
				170					175					180
Arg	Asp	Leu	Val	Ile	Ser	Ile	Ser	Arg	Asp	Asn	Thr	Pro	Ala	Leu
				185					190					195
Glu	Pro	Gln	Pro	Gln	Gly	Asn	Val	Pro	Tyr	Leu	Glu	Ala	Gln	Lys
				200					205					210
Gly	Gln	Phe	Leu	Arg	Leu	Leu	Cys	Ala	Ala	Asp	Ser	Gln	Pro	Pro
				215					220					225
Ala	Thr	Leu	Ser	Trp	Val	Leu	Gln	Asn	Arg	Val	Leu	Ser	Ser	Ser
				230					235					240
His	Pro	Trp	Gly	Pro	Arg	Pro	Leu	Gly	Leu	Glu	Leu	Pro	Gly	Val
				245					250					255

Lys	Ala	Gly	Asp	Ser	Gly	Arg	Tyr	Thr	Cys	Arg	Ala	Glu	Asn	Arg	
				260					265					270	
Leu	Gly	Ser	Gln	Gln	Arg	Ala	Leu	Asp	Leu	Ser	Val	Gln	Tyr	Pro	
				275					280					285	
Pro	Glu	Asn	Leu	Arg	Val	Met	Val	Ser	Gln	Ala	Asn	Arg	Thr	Val	
				290					295					300	
Leu	Glu	Asn	Leu	Gly	Asn	Gly	Thr	Ser	Leu	Pro	Val	Leu	Glu	Gly	
				305					310					315	
Gln	Ser	Leu	Cys	Leu	Val	Cys	Val	Thr	His	Ser	Ser	Pro	Pro	Ala	
				320					325					330	
Arg	Leu	Ser	Trp	Thr	Gln	Arg	Gly	Gln	Val	Leu	Ser	Pro	Ser	Gln	
				335					340					345	
Pro	Ser	Asp	Pro	Gly	Val	Leu	Glu	Leu	Pro	Arg	Val	Gln	Val	Glu	
				350					355					360	
His	Glu	Gly	Glu	Phe	Thr	Cys	His	Ala	Arg	His	Pro	Leu	Gly	Ser	
				365					370					375	
Gln	His	Val	Ser	Leu	Ser	Leu	Ser	Val	His	Tyr	Lys	Lys	Gly	Leu	
				380					385					390	
Ile	Ser	Thr	Ala	Phe	Ser	Asn	Gly	Ala	Phe	Leu	Gly	Ile	Gly	Ile	
				395					400					405	
Thr	Ala	Leu	Leu	Phe	Leu	Cys	Leu	Ala	Leu	Ile	Ile	Met	Lys	Ile	
				410					415					420	
Leu	Pro	Lys	Arg	Arg	Thr	Gln	Thr	Glu	Thr	Pro	Arg	Pro	Arg	Phe	
				425					430					435	
Ser	Arg	His	Ser	Thr	Ile	Leu	Asp	Tyr	Ile	Asn	Val	Val	Pro	Thr	
				440					445					450	
Ala	Gly	Pro	Leu	Ala	Gln	Lys	Arg	Asn	Gln	Lys	Ala	Thr	Pro	Asn	
				455					460					465	
Ser	Pro	Arg	Thr	Pro	Pro	Pro	Pro	Gly	Ala	Pro	Ser	Pro	Glu	Ser	
				470					475					480	
Lys	Lys	Asn	Gln	Lys	Lys	Gln	Tyr	Gln	Leu	Pro	Ser	Phe	Pro	Glu	
				485					490					495	
Pro	Lys	Ser	Ser	Thr	Gln	Ala	Pro	Glu	Ser	Gln	Glu	Ser	Gln	Glu	
				500					505					510	
Glu	Leu	His	Tyr	Ala	Thr	Leu	Asn	Phe	Pro	Gly	Val	Arg	Pro	Arg	
				515					520					525	
Pro	Glu	Ala	Arg	Met	Pro	Lys	Gly	Thr	Gln	Ala	Asp	Tyr	Ala	Glu	
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Val	Lys	Phe	Gln												

<210> 260  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 260  
caaagcctgc gcctggctcg tg 22

<210> 261  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 261  
ttctggagcc cagaggggtgc tgag 24

<210> 262  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 262  
ggagctgccca cccattcaaa tggagcacga aggagagttc acctg 45

<210> 263  
<211> 2857  
<212> DNA  
<213> Homo sapiens

<400> 263  
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actgctgcgt tttatggttg gaattcctct cctatggcct tgtcttggag 100  
caacagaaaa ctctcaaaa aagaaagtca agcagccagt gcgatctcat 150  
ttgagagtga agcgtggctg ggtgtggaac caattttttg taccagagga 200  
aatgaatagc actagtcatc acatcggcca gctaagatct gatttagaca 250  
atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaagt 300  
acttttatca ttgatgaaag aacaggtgac atatatgcca tacagaagct 350  
tgatagagag gagcgatccc tctacatctt aagagcccag gtaatagaca 400  
tcgctactgg aagggctgtg gaacctgagt ctgagtttgt catcaaagtt 450

toggatatca atgacaatga accaaaattc ctagatgaac cttatgaggc 500  
 cattgtacca gagatgtctc cagaaggaac attagttatc caggtgacag 550  
 caagtgatgc tgacgatccc tcaagtggta ataatgctcg tctcctctac 600  
 agcttacttc aaggccagcc atatttttct gttgaaccaa caacaggagt 650  
 cataagaata tcttctaaaa tggatagaga actgcaagat gagtattggg 700  
 taatcattca agccaaggac atgattggtc agccaggagc gttgtctgga 750  
 acaacaagtg tattaattaa actttcagat gttaatgaca ataagcctat 800  
 atttaaagaa agtttatacc gcttgactgt ctctgaatct gcacccactg 850  
 ggacttctat aggaacaatc atggcatatg ataatgacat aggagagaat 900  
 gcagaaatgg attacagcat tgaagaggat gattcgcaaa catttgacat 950  
 tattactaat catgaaactc aagaaggaat agttatatta aaaaagaaag 1000  
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 tttcattaag atccagggtg aagatgttga tgagcctcct cttttcctcc 1150  
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 gtaggcgtgg tgtctgccac agaccagac aataggaaat ctcctatcag 1250  
 gtattctatt actaggagca aagtgttcaa tatcaatgat aatggtacaa 1300  
 tcactacaag taactcactg gatcgtgaaa tcagtgcttg gtacaaccta 1350  
 agtattacag ccacagaaaa atacaatata gaacagatct cttcgatccc 1400  
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 aatactatga gacttatgtt tgtgaaaatg caggctctgg tcaggtaatt 1500  
 cagactatca gtgcagtgga tagagatgaa tccatagaag agcaccattt 1550  
 ttactttaat ctatctgtag aagacactaa caattcaagt tttacaatca 1600  
 tagataatca agataacaca gctgtcattt tgactaatag aactggtttt 1650  
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 tggaatcccg tcacttacia gtacaaacac ccttaccatc catgtctgtg 1750  
 actgtggtga cagtgggagc acacagacct gccagtacca ggagcttgtg 1800  
 ctttccatgg gattcaagac agaagttatc attgctattc tcatttgcac 1850  
 tatgatcata tttgggttta ttttttgac tttgggttta aaacaacgga 1900

gaaaacagat tctatttcct gagaaaagtg aagatttcag agagaatata 1950  
 ttccaatatg atgatgaagg ggggtggagaa gaagatacag aggcctttga 2000  
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 acccaatggg agtcttaaag agttttgtgc cctggctcta tggcggggaa 2450  
 agccctagtc tatggagttt tctgatttcc ctggagtaaa tactccatgg 2500  
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 aatgtaggaa gatattaaaa gtatgagaga ggacacaaga ttagtcgat 2650  
 ccttatgcga ttatatcatt atttacttag gaaagagtaa aaataccaaa 2700  
 cgagaaaatt taaaggagca aaaatttgca agtcaaataa aaatgtacaa 2750  
 atcgagataa catttacatt tctatcatat tgacatgaaa attgaaaatg 2800  
 tatagtcaga gaaattttca tgaattattc catgaagtat tgtttccttt 2850  
 atttaaa 2857

<210> 264

<211> 772

<212> PRT

<213> Homo sapiens

<400> 264

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Leu	Trp	Pro	Cys	Leu	Gly	Ala	Thr	Glu	Asn	Ser	Gln	Thr	Lys	Lys
				20					25					30
Val	Lys	Gln	Pro	Val	Arg	Ser	His	Leu	Arg	Val	Lys	Arg	Gly	Trp
				35					40					45
Val	Trp	Asn	Gln	Phe	Phe	Val	Pro	Glu	Glu	Met	Asn	Thr	Thr	Ser
				50					55					60



His	His	Ile	Gly	Gln	Leu	Arg	Ser	Asp	Leu	Asp	Asn	Gly	Asn	Asn	
				65					70					75	
Ser	Phe	Gln	Tyr	Lys	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Ser	Thr	Phe	
				80					85					90	
Ile	Ile	Asp	Glu	Arg	Thr	Gly	Asp	Ile	Tyr	Ala	Ile	Gln	Lys	Leu	
				95					100					105	
Asp	Arg	Glu	Glu	Arg	Ser	Leu	Tyr	Ile	Leu	Arg	Ala	Gln	Val	Ile	
				110					115					120	
Asp	Ile	Ala	Thr	Gly	Arg	Ala	Val	Glu	Pro	Glu	Ser	Glu	Phe	Val	
				125					130					135	
Ile	Lys	Val	Ser	Asp	Ile	Asn	Asp	Asn	Glu	Pro	Lys	Phe	Leu	Asp	
				140					145					150	
Glu	Pro	Tyr	Glu	Ala	Ile	Val	Pro	Glu	Met	Ser	Pro	Glu	Gly	Thr	
				155					160					165	
Leu	Val	Ile	Gln	Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Ser	Ser	
				170					175					180	
Gly	Asn	Asn	Ala	Arg	Leu	Leu	Tyr	Ser	Leu	Leu	Gln	Gly	Gln	Pro	
				185					190					195	
Tyr	Phe	Ser	Val	Glu	Pro	Thr	Thr	Gly	Val	Ile	Arg	Ile	Ser	Ser	
				200					205					210	
Lys	Met	Asp	Arg	Glu	Leu	Gln	Asp	Glu	Tyr	Trp	Val	Ile	Ile	Gln	
				215					220					225	
Ala	Lys	Asp	Met	Ile	Gly	Gln	Pro	Gly	Ala	Leu	Ser	Gly	Thr	Thr	
				230					235					240	
Ser	Val	Leu	Ile	Lys	Leu	Ser	Asp	Val	Asn	Asp	Asn	Lys	Pro	Ile	
				245					250					255	
Phe	Lys	Glu	Ser	Leu	Tyr	Arg	Leu	Thr	Val	Ser	Glu	Ser	Ala	Pro	
				260					265					270	
Thr	Gly	Thr	Ser	Ile	Gly	Thr	Ile	Met	Ala	Tyr	Asp	Asn	Asp	Ile	
				275					280					285	
Gly	Glu	Asn	Ala	Glu	Met	Asp	Tyr	Ser	Ile	Glu	Glu	Asp	Asp	Ser	
				290					295					300	
Gln	Thr	Phe	Asp	Ile	Ile	Thr	Asn	His	Glu	Thr	Gln	Glu	Gly	Ile	
				305					310					315	
Val	Ile	Leu	Lys	Lys	Lys	Val	Asp	Phe	Glu	His	Gln	Asn	His	Tyr	
				320					325					330	
Gly	Ile	Arg	Ala	Lys	Val	Lys	Asn	His	His	Val	Pro	Glu	Gln	Leu	
				335					340					345	
Met	Lys	Tyr	His	Thr	Glu	Ala	Ser	Thr	Thr	Phe	Ile	Lys	Ile	Gln	

350										355				360			
Val	Glu	Asp	Val	Asp	Glu	Pro	Pro	Leu	Phe	Leu	Leu	Pro	Tyr	Tyr			
				365					370					375			
Val	Phe	Glu	Val	Phe	Glu	Glu	Thr	Pro	Gln	Gly	Ser	Phe	Val	Gly			
				380					385					390			
Val	Val	Ser	Ala	Thr	Asp	Pro	Asp	Asn	Arg	Lys	Ser	Pro	Ile	Arg			
				395					400					405			
Tyr	Ser	Ile	Thr	Arg	Ser	Lys	Val	Phe	Asn	Ile	Asn	Asp	Asn	Gly			
				410					415					420			
Thr	Ile	Thr	Thr	Ser	Asn	Ser	Leu	Asp	Arg	Glu	Ile	Ser	Ala	Trp			
				425					430					435			
Tyr	Asn	Leu	Ser	Ile	Thr	Ala	Thr	Glu	Lys	Tyr	Asn	Ile	Glu	Gln			
				440					445					450			
Ile	Ser	Ser	Ile	Pro	Leu	Tyr	Val	Gln	Val	Leu	Asn	Ile	Asn	Asp			
				455					460					465			
His	Ala	Pro	Glu	Phe	Ser	Gln	Tyr	Tyr	Glu	Thr	Tyr	Val	Cys	Glu			
				470					475					480			
Asn	Ala	Gly	Ser	Gly	Gln	Val	Ile	Gln	Thr	Ile	Ser	Ala	Val	Asp			
				485					490					495			
Arg	Asp	Glu	Ser	Ile	Glu	Glu	His	His	Phe	Tyr	Phe	Asn	Leu	Ser			
				500					505					510			
Val	Glu	Asp	Thr	Asn	Asn	Ser	Ser	Phe	Thr	Ile	Ile	Asp	Asn	Gln			
				515					520					525			
Asp	Asn	Thr	Ala	Val	Ile	Leu	Thr	Asn	Arg	Thr	Gly	Phe	Asn	Leu			
				530					535					540			
Gln	Glu	Glu	Pro	Val	Phe	Tyr	Ile	Ser	Ile	Leu	Ile	Ala	Asp	Asn			
				545					550					555			
Gly	Ile	Pro	Ser	Leu	Thr	Ser	Thr	Asn	Thr	Leu	Thr	Ile	His	Val			
				560					565					570			
Cys	Asp	Cys	Gly	Asp	Ser	Gly	Ser	Thr	Gln	Thr	Cys	Gln	Tyr	Gln			
				575					580					585			
Glu	Leu	Val	Leu	Ser	Met	Gly	Phe	Lys	Thr	Glu	Val	Ile	Ile	Ala			
				590					595					600			
Ile	Leu	Ile	Cys	Ile	Met	Ile	Ile	Phe	Gly	Phe	Ile	Phe	Leu	Thr			
				605					610					615			
Leu	Gly	Leu	Lys	Gln	Arg	Arg	Lys	Gln	Ile	Leu	Phe	Pro	Glu	Lys			
				620					625					630			
Ser	Glu	Asp	Phe	Arg	Glu	Asn	Ile	Phe	Gln	Tyr	Asp	Asp	Glu	Gly			
				635					640					645			

Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	Phe	Asp	Ile	Ala	Glu	Leu	Arg	
				650					655					660	
Ser	Ser	Thr	Ile	Met	Arg	Glu	Arg	Lys	Thr	Arg	Lys	Thr	Thr	Ser	
				665					670					675	
Ala	Glu	Ile	Arg	Ser	Leu	Tyr	Arg	Gln	Ser	Leu	Gln	Val	Gly	Pro	
				680					685					690	
Asp	Ser	Ala	Ile	Phe	Arg	Lys	Phe	Ile	Leu	Glu	Lys	Leu	Glu	Glu	
				695					700					705	
Ala	Asn	Thr	Asp	Pro	Cys	Ala	Pro	Pro	Phe	Asp	Ser	Leu	Gln	Thr	
				710					715					720	
Tyr	Ala	Phe	Glu	Gly	Thr	Gly	Ser	Leu	Ala	Gly	Ser	Leu	Ser	Ser	
				725					730					735	
Leu	Glu	Ser	Ala	Val	Ser	Asp	Gln	Asp	Glu	Ser	Tyr	Asp	Tyr	Leu	
				740					745					750	
Asn	Glu	Leu	Gly	Pro	Arg	Phe	Lys	Arg	Leu	Ala	Cys	Met	Phe	Gly	
				755					760					765	
Ser	Ala	Val	Gln	Ser	Asn	Asn									
				770											

<210> 265  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 24, 60, 141, 226, 228, 249, 252  
 <223> unknown base

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 attcaagcca aggacatgat tggtcagcca ggagcgttgt ntggaacaac 150  
 aagtgtatta attaaacttt cagatgttaa tgacaataag cctatatatta 200  
 aagaaagttt ataccgcttg actgtntntg aatctgcacc cactgggant 250  
 tntataggaa caatcatggc atatgataat gacataggag agaatgcaga 300  
 aatggattac agcattgaag aggatgattc gcaaacattt gacattatt 349

<210> 266  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 266

cttgactgtc tctgaatctg caccc 25

<210> 267

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 267

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<210> 268

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 268

ccactacggt attagagcaa aagttaaaaa ccatcatggt tcctggagca 50

gc 52

<210> 269

<211> 2747

<212> DNA

<213> Homo sapiens

<400> 269

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cccgcttaa cttcctccgc ggggcccagc caccttcggg agtcggggtt 150

gcccacctgc aaactctccg ctttctgcac ctgccacccc tgagccagcg 200

cgggcccccg agcgagtcag ggccaacgcg gggctgcagc tgttggggtt 250

cattctcgcc ttctgggat ggatcggcgc catcgtcagc actgccctgc 300

cccagtggag gatttactcc tatgccggcg acaacatcgt gaccgcccag 350

gccatgtacg aggggctgtg gatgtcctgc gtgtcgcaga gcaccgggca 400

gatccagtgc aaagtctttg actccttgct gaatctgagc agcacattgc 450

aagcaacccg tgccttgatg gtggttggca tctcctggg agtgatagca 500

atctttgtgg ccaccgttg catgaagtgt atgaagtgt tggaagacga 550

tgagggtgcag aagatgagga tggctgtcat tgggggtgcg atatttcttc 600

ttgcaggctt ggctatttta gttgccacag catgggatgg caatagaatc 650  
 gttcaagaat tctatgaccc tatgacccca gtcaatgcca ggtacgaatt 700  
 tggtcaggct ctcttcactg gctgggctgc tgcttctctc tgccttctgg 750  
 gaggtgccct actttgctgt tctgtcccc gaaaaacaac ctcttaccca 800  
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 acattgagat actatcatta acattaggac cttagaattt tgggtattgt 950  
 aatctgaagt atgggtattac aaaacaaaca aacaaacaaa aaacccatgt 1000  
 gttaaaatac tcagtgttaa acatggctta atcttatttt atcttctttc 1050  
 ctcaatatag gaggggaagt ttttccattt gtattactgc ttcccattga 1100  
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 tgtatatata catgtttttc tattaataat agacagtaaa atactattct 1200  
 cattatgttg atactagcat acttaaaata tctctaaaat aggtaaatgt 1250  
 atttaattcc atattgatga agatgtttat tgggtatattt tctttttcgt 1300  
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 tttcaattct tcatgctgc ccttttcata tacttatttt attttttacc 1450  
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 tcattgggtct ctatctcctg aatctaacac atttcatagc ctacatttta 1550  
 gtttctaaag ccaagaagaa tttattacaa atcagaactt tggaggcaaa 1600  
 tctttctgca tgaccaaagt gataaattcc tgttgacctt cccacacaat 1650  
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 tgtaagcaag tcacttaatc tttctacctc ttttttctat ctgccaaatt 2000  
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 ccactgaaca aaacctacac acataccttc atgtgggttca gtgccttctt 2250  
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 gatgttggtg ggatccagtg agatagaata catgtaagtg tggttttgta 2650  
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<210> 270  
 <211> 211  
 <212> PRT  
 <213> Homo sapiens

<400> 270  
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 20 25 30  
 Arg Ile Tyr Ser Tyr Ala Gly Asp Asn Ile Val Thr Ala Gln Ala  
 35 40 45  
 Met Tyr Glu Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly  
 50 55 60  
 Gln Ile Gln Cys Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser  
 65 70 75  
 Thr Leu Gln Ala Thr Arg Ala Leu Met Val Val Gly Ile Leu Leu  
 80 85 90  
 Gly Val Ile Ala Ile Phe Val Ala Thr Val Gly Met Lys Cys Met  
 95 100 105  
 Lys Cys Leu Glu Asp Asp Glu Val Gln Lys Met Arg Met Ala Val  
 110 115 120

Ile	Gly	Gly	Ala	Ile	Phe	Leu	Leu	Ala	Gly	Leu	Ala	Ile	Leu	Val
				125					130					135
Ala	Thr	Ala	Trp	Tyr	Gly	Asn	Arg	Ile	Val	Gln	Glu	Phe	Tyr	Asp
				140					145					150
Pro	Met	Thr	Pro	Val	Asn	Ala	Arg	Tyr	Glu	Phe	Gly	Gln	Ala	Leu
				155					160					165
Phe	Thr	Gly	Trp	Ala	Ala	Ala	Ser	Leu	Cys	Leu	Leu	Gly	Gly	Ala
				170					175					180
Leu	Leu	Cys	Cys	Ser	Cys	Pro	Arg	Lys	Thr	Thr	Ser	Tyr	Pro	Thr
				185					190					195
Pro	Arg	Pro	Tyr	Pro	Lys	Pro	Ala	Pro	Ser	Ser	Gly	Lys	Asp	Tyr
				200					205					210

Val

<210> 271  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 21, 69, 163, 434, 436, 444  
 <223> unknown base

<400> 271  
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 ctccctatgc tggcgacaac atcgtgaccg cccagcccat gtacgagggg 150  
 ctgtggatgt ccngcgtgtc gcagagcacc gggcagatcc agtgcaaagt 200  
 ctttgactcc ttgctgaatc tgagcagcac attgcaagca acccgtgcct 250  
 tgatggtggt tggcatcctc ctgggagtga tagcaatctt tgtggccacc 300  
 gttggcatga agtgtatgaa gtgcttgga gacgatgagg tgcagaagat 350  
 gaggatggct gtcattgggg gcgcgatatt tcttcttgca ggtctggcta 400  
 ttttagttgc cacagcatgg tatggcaata gaancnttca acanttctat 450  
 gaccctatga cccagtcaa tgccaggtac gaatttggtc aggctctctt 500  
 cactggctgg gctgctgctt ctctctgctt tctgggaggt gccctacttt 550  
 gctgttcctg tccc 564

<210> 272  
 <211> 498

<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 30, 49, 102, 141, 147, 171, 324-325, 339-341  
<223> unknown base

<400> 272  
acccttgacc caacgcggcc ccccgaccgn ttcattggcca aacgcgggnc 50  
tccagctggt gggcttcatt ctcccttcc tgggatggac cggcgcccat 100  
cntcagcact gccctgcccc agtggaggat ttactcctat nccggcnaca 150  
acatcgtgac cgcccaggcc ntgtacgagg ggctgtggat gtcctgcgtg 200  
tcgcagagca cggggcagat ccagtgc aaa gtctttgact cccttgctga 250  
atctgagcag cacattgcaa gcaaccctg ccttgatggg ggttggcctc 300  
ctcctgggag tgatagcaat cttnttggcc accgttgtnn ntgaagtgtg 350  
tgaagtgctt ggaagacgat gaggtgcaga agatgaggat ggctgtcatt 400  
gggggcgcga tatttcttct tgcaggtctg gctattttag ttgccacagc 450  
atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccga 498

<210> 273  
<211> 552  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 25, 57, 67, 94-95, 116, 152, 165, 212, 233, 392-394  
<223> unknown base

<400> 273  
gggcccgacc attatccaac cgggntcact gttggctcat ctccctctctg 50  
gatgaancgc gccatcntca gactccctgc cccatggaga tttncctat 100  
gctggcgaca acatcntgac cccagccat gtacgagggg ctttgaacgt 150  
cngcgtgtcg cagancaccg ggcagatcca gtgcaaagtc tttgactcct 200  
tgctgaatct gngcagcaca ttgcagcaac ccntgccctg atggtgggtg 250  
gcacccctct gggagtgata gcaatctttg tggccaccgt tggcatgaag 300  
tgtatgaagt gcttgaaga cgatgaggtg cagaagatga ggatggctgt 350  
cattgggggc gcgatatttc ttcttgcagg tctggctatt tnnngttgcc 400  
acagcatggt atggcaatag aatcgttcaa gaattctatg accctatgac 450



cccagtcaat gccaggtacg aatttgggtca ggctctcttc actgggtggg 500  
 ctgtctgcttc tctctgcctt ctgggaggtg cctactttg ctgttctgc 550  
 ga 552  
 <210> 274  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> unsure  
 <222> 25, 50, 60, 123, 127, 370, 395, 397-398, 402-403, 405-407  
 <223> unknown base  
 <400> 274  
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 tggaggattn actcctatgc tggcgacaac atcgtgaccc cccaggccat 100  
 ttaccgaggg gctttggatg tcttgctgt cgcagagcac cgggcagatc 150  
 ccagtgcaaa gtctttgact ccttgctgaa tctgagcagc acattgcaag 200  
 caaccctgc cttgatggg ttggcatcct cctgggagtg atagcaacct 250  
 ttgtggccac cgttggcatg aagtgtatga agtgcttga agacgatgag 300  
 gtgccagaag atgaggatgg ctgtcattgg gggcgcgata tttcttgttg 350  
 caggtctggc tattttagtn gccacagcat ggtatggcaa tagantnntt 400  
 cnnnnntct atgacctat gacccagtc aatgccaggt acgaatttg 450  
 tcaggctctc ttcactggct gggctgctgc ttctctctgc cttctgggag 500  
 gtgcctact ttgctgttcc tgtccc 526  
 <210> 275  
 <211> 398  
 <212> DNA  
 <213> Homo sapiens  
 <220>  
 <221> unsure  
 <222> 22, 61, 91, 144, 238-239, 262, 265-266, 271, 274  
 <223> unknown base  
 <400> 275  
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 gcagcacatt ncaagcaacc ccttgcttg aagggtggtg ncatcccccc 100  
 tgggagtga tagcaatctt tgtggccacc gttggcatga agtntatgaa 150  
 gtgcttgaa gacgatgagg tgcagaagat gaggatggct gtcattggg 200

gcgcgatatt tcttcttgca ggtctggcta ttttagtnnc cacagcatgg 250  
 tatggcaata gnatnnttcg nggntttctat gaccctatga cccagtcaa 300  
 tgccaggtac gaatttggtc aggctctctt cactggctgg gctgctgctt 350  
 ctctctgcct tctgggaggt gccctacttt gctgttcctg tccccgaa 398

<210> 276  
 <211> 495  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 39, 58, 130, 234, 314, 364, 427, 450, 461, 476  
 <223> unknown base

<400> 276  
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 cagagcaccg ggcagatcca gtgcaaagtn tttgactcct tgctgaattt 150  
 gagcagcaca ttgcaagcaa cccgtgcctt gatggtggtt ggcatcttcc 200  
 tgggagtgat agcaatcttt gtggccaccg tggnaatgaa gtgtatgaag 250  
 tgcttggaag acgatgaggt gcagaagatg aggatggctg tcattggggg 300  
 cgcgatattt cttnttgcag gtctggctat tttagtgtcc acagcatggt 350  
 atggcaatag aatngttcaa gaattttatg accctatgac cccagtcaat 400  
 gccaggtacg aatttggtca ggctttnttc actggctggg ctgctgcttn 450  
 tttctgcctt ntgggaggtg ccctantttg ctgttcctgc gaacc 495

<210> 277  
 <211> 200  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 34, 87, 138, 147, 163, 165-166, 172  
 <223> unknown base

<400> 277  
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 cacagcatgg tatggcaata gaatcgttca agaattntat gaccctatga 100  
 cccagtcaa tgccaggtac gaatttggtc aggctctntt cactggntgg 150  
 gctgctgctt ctntnngcct tntgggaggt gccctacttt gctgttcctg 200

<210> 278  
<211> 542  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 26, 43, 55, 77, 198, 361-362, 391-392, 396  
<223> unknown base

<400> 278  
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ttacncctat gctggcgaac aacatcntga ccgcccaggc catgtacgag 100  
gggctgtgga atgtcctgcg tgtcccagag caccgggcag atccagtgc 150  
aagtctttga ctcttgctg aatctgagca gcacattgca agcaaccntg 200  
ccttgatggt gggtggcatc ctctgggag tgatagcaat ctttgtggcc 250  
accgttggca tgaaagtgt tgaagtgtt ggaagacgat gaggtgcaga 300  
agatgaggat ggctgtcatt gggggcgcga tattttcttct tgcaggctctg 350  
gctatttttag nngccacagc atgggtatggc aatcagaccc nntcanaaac 400  
tctatgaccc tatgaccca gtcaatgcc ggtacgaatt tggtcaggct 450  
ctcttcactg gctgggctgc tgcttctctc tgcttcttgg gaggtgcct 500  
actttgctgt tcctgtcccc gaaaaacaac ctcttaccga cg 542

<210> 279  
<211> 548  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 90, 115, 147, 228, 387  
<223> unknown base

<400> 279  
cggggctgca gctgttgggc ttcactctgc ttcctgggat ggaatcggcg 50  
ccatcgtcag cactgccctg ccccatggag gatttactcn tatgtggcg 100  
acaacatcgt gaccncccag gccatgtacg aggggctgtg gatgtcngcg 150  
tgtcgcagag caccgggcag atccagtgc aagtctttga ctcttgctg 200  
aatctgagca gcacattgca agcaaccntg ccttgatggt gggtggcatc 250  
ctcctgggag tgatagcaat ctttgtggcc accgttggca tgaagtgtat 300  
gaagtgtctg gaagacgatg aggtgcagaa gatgaggatg gctgtcattg 350

ggggcgcgat atttcttctt gcaggtctgg ctatttntag ttgccacagc 400  
 atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccccag 450  
 tcaatgccag gtacgaattt ggtcaggctc tcttcaactgg ctgggctgct 500  
 gcttctctct gccttctggg aggtgcccta ctttctgtgt cctgcgaa 548

<210> 280  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 280  
 cgagcgagtc atggccaacg c 21

<210> 281  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 281  
 gtgtcacacg tagtctttcc cgctgg 26

<210> 282  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 282  
 ctgcagctgt tgggcttcat tctcgccctc ctgggatgga tcg 43

<210> 283  
 <211> 2285  
 <212> DNA  
 <213> Homo sapiens

<400> 283  
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 ctgcgcctgc accgcgtaga ccgaccccc cctccagcgc gccacccgg 100  
 tagaggacct ccgcccgtgc cccgaccggt ccccgcttt ttgtaaaact 150  
 taaagcgggc gcagcattaa cgcttccgc cccggtgacc tctcaggggt 200  
 ctccccgcca aaggtgctcc gccgctaagg aacatggcga aggtggagca 250  
 ggtcctgagc ctcgagccgc agcacgagct caaattccga ggtcccttca 300

cccgatgttgt caccaccaac ctaaagcttg gcaacccgac agaccgaaat 350  
 gtgtgtttta aggtgaagac tacagcacca cgtaggtact gtgtgaggcc 400  
 caacagcggga atcatcgatg caggggcctc aattaatgta tctgtgatgt 450  
 tacagccttt cgattatgat cccaatgaga aaagtaaaca caagtttatg 500  
 gttcagtcta tgtttgctcc aactgacact tcagatatgg aagcagtatg 550  
 gaaggaggca aaaccggaag accttatgga ttcaaaactt agatgtgtgt 600  
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 ccccatattca gcattagccc caactgggaa ggaagaaggc cttagcacc 900  
 ggctcttggc tctggtggtt ttgttcttta tegtgtgtgt aattattggg 950  
 aagattgcct ttagagggtg gcctgcacag gatggtaa at tggattggtg 1000  
 gatccaccat atcatgggat ttaaatttat cataaccatg tgtaaaaaga 1050  
 aattaatgta tgatgacatc tcacaggtct tgcctttaa ttaccctctc 1100  
 ctgcacacac atacacagat acacacacac aaatataatg taacgatctt 1150  
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 ctttattaat gacaaggga accatgagta atgccacaat ggcatattgt 1250  
 aaatgtcatt ttaaacattg gtaggccttg gtacatgatg ctggattacc 1300  
 tctcttaaaa tgacaccctt cctgcctgtg tgggtgctggc cttggggag 1350  
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 acgtggccca ctcccggccc aggtgcttt cegtgtcttc agttctgtcc 1450  
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 catgttttct tattgtcaca agagtacagt taatgctgcg tgctgctgaa 1750

ctctgttggg tgaactggta ttgctgctgg agggctgtgg gctcctctgt 1800  
 ctctggagag tctggatcatg tggaggtggg gtttattggg atgctggaga 1850  
 agagctgcc a ggaagtgtt tttctgggtc agtaaataac aactgtcata 1900  
 gggagggaaa ttctcagtag tgacagtcaa ctctaggtta ctttttttaa 1950  
 tgaagagtag tcagtcttct agattgttct tataccacct ctcaaccatt 2000  
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 ggacctagcc tggagtcagg acaaatggat cgggctgcag agggttagaa 2100  
 gcgagggcac cagcagttgt ggggtggggag caagggaaga gagaaactct 2150  
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 agaaaaatta taataaagcc ccaaaattaa gaaaa 2285

<210> 284  
 <211> 243  
 <212> PRT  
 <213> Homo sapiens

<400> 284  
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 35 40 45  
 Thr Thr Ala Pro Arg Arg Tyr Cys Val Arg Pro Asn Ser Gly Ile  
 50 55 60  
 Ile Asp Ala Gly Ala Ser Ile Asn Val Ser Val Met Leu Gln Pro  
 65 70 75  
 Phe Asp Tyr Asp Pro Asn Glu Lys Ser Lys His Lys Phe Met Val  
 80 85 90  
 Gln Ser Met Phe Ala Pro Thr Asp Thr Ser Asp Met Glu Ala Val  
 95 100 105  
 Trp Lys Glu Ala Lys Pro Glu Asp Leu Met Asp Ser Lys Leu Arg  
 110 115 120  
 Cys Val Phe Glu Leu Pro Ala Glu Asn Asp Lys Pro His Asp Val  
 125 130 135  
 Glu Ile Asn Lys Ile Ile Ser Thr Thr Ala Ser Lys Thr Glu Thr  
 140 145 150

Pro	Ile	Val	Ser	Lys	Ser	Leu	Ser	Ser	Ser	Leu	Asp	Asp	Thr	Glu
				155					160					165
Val	Lys	Lys	Val	Met	Glu	Glu	Cys	Lys	Arg	Leu	Gln	Gly	Glu	Val
				170					175					180
Gln	Arg	Leu	Arg	Glu	Glu	Asn	Lys	Gln	Phe	Lys	Glu	Glu	Asp	Gly
				185					190					195
Leu	Arg	Met	Arg	Lys	Thr	Val	Gln	Ser	Asn	Ser	Pro	Ile	Ser	Ala
				200					205					210
Leu	Ala	Pro	Thr	Gly	Lys	Glu	Glu	Gly	Leu	Ser	Thr	Arg	Leu	Leu
				215					220					225
Ala	Leu	Val	Val	Leu	Phe	Phe	Ile	Val	Gly	Val	Ile	Ile	Gly	Lys
				230					235					240

Ile Ala Leu

<210> 285  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 40, 53, 68, 119, 134, 177-178, 255  
 <223> unknown base

<400> 285  
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 ctggagtcag gacaatggnt cgggctgcag aggnntagaa gcgagggcac 150  
 cagcagtttt ggggtggggag caagggngga gagaaactct tcagcgaatc 200  
 cttctagtag tagttgagag tttgactgtg aattaatttt atgccataaa 250  
 agacnaaccc agttctgttt gactatgtag catcttgaaa agaaaaatta 300  
 taataaagcc ccaaaattaa gaattctttt gtcattttgt cacatttgct 350  
 ctatgggggg aattattatt ttatcatttt tattattttg ccattggaag 400  
 gttaacttta aaatgagc 418

<210> 286  
 <211> 543  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 73, 97

<223> unknown base

<400> 286

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gggagctgga gccccagcat gctggggagt gcggtcagct ccacacagta 150  
gtccccacgt ggcccactcc cggcccaggc tgctttccgt gtcttcagtt 200  
ctgtccaagc catcagctcc ttgggactga tgaacagagt cagaagccca 250  
aaggaattgc cactgtggca gcatcagacg tactcgatcat aagtgagagg 300  
cgtgtgttga ctgattgacc cagcgctttg gaaataaatg gcagtgcctt 350  
gttcacttaa agggaccaag ctaaattgta ttggttcatg tagtgaagtc 400  
aaactgttat tcagagatgt ttaatgcata ttttaacttat ttaatgtatt 450  
tcattctcatg ttttcttatt gtcacaagag tacagttaat gctgcgtgct 500  
gctgaactct gttgggtgaa ctggtattgc tgctggaggg ctg 543

<210> 287

<211> 270

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 38, 64, 72, 164, 198, 200, 220, 222, 229, 242

<223> unknown base

<400> 287

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ctttagaggg tagnatgcac cnggctggta aattggattg gtggatccac 100  
catatccatg ggatttaaat ttatcataac catgtgtaaa aagaaattaa 150  
tgtatgatga catntcacag gtattgcctt taaattaccc atccctgnan 200  
acacatacac agatacacan anacaaatnt aatgtaacga tnttttagaa 250  
agttaaaaat gtatagtaac 270

<210> 288

<211> 428

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 35, 116, 129, 197, 278, 294, 297, 349, 351

<223> unknown base



<400> 288  
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 gcaactgtggc agcatnagac gtacttgtna taagtgaag gctgtgttg 150  
 actgattgac ccagcgcttt ggaaataaat ggcagtgttt tgttcantta 200  
 aagggaccaa gctaaatttg tattgggttca tgtagtgaag tcaaactgtt 250  
 attcagagat gtttaatgca tatttaantt atttaatgta tttnatntca 300  
 tgttttctta ttgtcacaag agtacagtta atgctgcgtg ctgctgaant 350  
 ntgttgggtg aactgggtatt gctgctggag ggctgtgggc tcctctgtct 400  
 ttggagagtc tgggtcatgtg gaggtggg 428

<210> 289  
 <211> 320  
 <212> DNA  
 <213> Homo sapiens

<400> 289  
 tgctttccgt gtcttcagtt ctgtccaagc catcagctcc ttgggacttg 50  
 atgaacagag tcagaagccc aaaggaattg cactgtggca gcatcagacg 100  
 tactcgtcat aagtgaagag cgtgtgttga ctgattgacc cagcgctttg 150  
 gaaataaatg gcagtgtttt gttcaactta aggaccaaag ctaaatttgt 200  
 attgggtcat gtagtgaagt caaactgtta ttcagagatg tttaatgcat 250  
 atttaactta tttaatgtat ttcactctcat gttttcttat tgtcacaaga 300  
 gtacagttaa tgctgcgtgc 320

<210> 290  
 <211> 609  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 57, 60, 186, 235, 244, 304, 339, 355, 359, 361, 387, 432, 441,  
 447, 481, 513, 532, 584, 598  
 <223> unknown base

<400> 290  
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 gaaacntgn gtaatgccac aatggcatat tgtaaagtgc attttaaaca 100  
 ttggtaggcc ttggtacatg atgctggatt acctctctta aaatgacacc 150  
 cttcctcgcc tgttggtgct ggcccttggg gagctngagc ccagcatgct 200

ggggagtgcg gtctgctcca cacagtagtc cccangtggc ccantcccgg 250  
 cccaggctgc tttccgtgtc ttcagttctg tccaagccat cagctccttg 300  
 ggantgatga acagagtcag aagcccaaag gaattgcant gtggcagcat 350  
 cagangtant ngtcataagt gagaggcgtg tgttgantga ttgaccacagc 400  
 gctttggaaa taaatggcag tgctttgttc anttaaaggg nccaagntaa 450  
 atttgtattg gttcatgtag tgaagtcaaa ntgttattca gagatgttta 500  
 atgcatattt aanttattta atgtatttca tntcatgttt tcttattgtc 550  
 acaagggtac agttaatgct gcgtgctgct gaantctggt gggatgaantg 600  
 gtattgctg 609

<210> 291  
 <211> 493  
 <212> DNA  
 <213> Homo sapiens

<400> 291  
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 ttcagttctg tccaagccat cagctccttg ggactgatga acagagtcag 150  
 aagcccaaag gaattgcact gtggcagcat cagacgtact cgtcataagt 200  
 gagaggcgtg tgttgactga ttgaccacagc gctttggaaa taaatggcag 250  
 tgctttgttc acttaaaggg accaagctaa atttgtattg gttcatgtag 300  
 tgaagtcaaa ctgttattca gagatgttta atgcatattt aacttattta 350  
 atgtatttca tctcatgttt tcttattgtc acaagagtac agttaatgct 400  
 gcgtgctgct gaactctggt gggatgaactg gtattgctgc tggagggctg 450  
 tgggctcctc tgtctctgga gagtctgggc atgtggaggt ggg 493

<210> 292  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 292  
 gcaccaccgt aggtacttgt gtgaggc 27

<210> 293  
 <211> 23  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 293

aaccaccaga gccaaagagcc ggg 23

<210> 294

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 294

cagcggaatc atcgatgcag gggcctcaat taatgtatct gtgatgttac 50

<210> 295

<211> 2530

<212> DNA

<213> Homo sapiens

<400> 295

gcgagctcgc ggtgctgtgg cccggccttg gcggggcggc ctccggctca 50

ggctggctga gaggtccca gctgcagcgt ccccgccgc ctccctcgga 100

gctctgatct cagctgacag tgcctcggg gaccaaaca gcctggcagg 150

gtctcacttt gttgcccagg ctggagttca gtgccatgat catggtttac 200

tgcagccttg acctcctggg ttcaagcgat cctgctgagt agctgggact 250

acaggacaaa attagaagat caaaatggaa aatatgctgc tttggttgat 300

atctttcacc cctgggtgga cctcattga tggatctgaa atggaatggg 350

atcttatgtg gcacttgaga aaggtagccc ggattgtcag tgaaaggact 400

ttccatctca ccagccccgc atttgaggca gatgctaaga tgatggtaaa 450

tacagtgtgt ggcacgaat gccagaaaga actcccaact cccagccttt 500

ctgaattgga ggattatctt tcctatgaga ctgtctttga gaatggcacc 550

cgaaccttaa ccagggtgaa agttcaagat ttggttcttg agccgactca 600

aaatatcacc acaaaggag tatctgttag gagaaagaga caggtgtatg 650

gcaccgacag caggttcagc atcttgga aaaggttctt aaccaatttc 700

cctttcagca cagctgtgaa gctttccacg ggctgtagtg gcattctcat 750

ttcccctcag catgttctaa ctgctgccca ctgtgttcat gatggaaagg 800

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ctcagggtcc tactctaaga agaataat aggatgctgg ttgtgtatta 1900  
aatgtgaaat tgcatagata aaggtagatg gtaaagcaat tagtatcaga 1950  
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caatgtgtat tatttaaaaa tgggagaaat agtttgttct atgaaataaa 2200  
cctagtttag aaataggga gctgagacat ttaagatct caagttttta 2250  
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cttcacaaat tatgaatgat catgtgttga aagccacatt attttatgct 2350  
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 tctttttcaa gaaagagtct ttttctcctt gacaaaatcc agcttttgta 2450  
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 cctaaaaatg aataaaattt atgaatatga 2530

<210> 296

<211> 413

<212> PRT

<213> Homo sapiens

<400> 296

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Thr	Leu	Ile	Asp	Gly	Ser	Glu	Met	Glu	Trp	Asp	Phe	Met	Trp	His	
			20						25					30	
Leu	Arg	Lys	Val	Pro	Arg	Ile	Val	Ser	Glu	Arg	Thr	Phe	His	Leu	
			35						40					45	
Thr	Ser	Pro	Ala	Phe	Glu	Ala	Asp	Ala	Lys	Met	Met	Val	Asn	Thr	
			50						55					60	
Val	Cys	Gly	Ile	Glu	Cys	Gln	Lys	Glu	Leu	Pro	Thr	Pro	Ser	Leu	
			65						70					75	
Ser	Glu	Leu	Glu	Asp	Tyr	Leu	Ser	Tyr	Glu	Thr	Val	Phe	Glu	Asn	
			80						85					90	
Gly	Thr	Arg	Thr	Leu	Thr	Arg	Val	Lys	Val	Gln	Asp	Leu	Val	Leu	
			95						100					105	
Glu	Pro	Thr	Gln	Asn	Ile	Thr	Thr	Lys	Gly	Val	Ser	Val	Arg	Arg	
			110						115					120	
Lys	Arg	Gln	Val	Tyr	Gly	Thr	Asp	Ser	Arg	Phe	Ser	Ile	Leu	Asp	
			125						130					135	
Lys	Arg	Phe	Leu	Thr	Asn	Phe	Pro	Phe	Ser	Thr	Ala	Val	Lys	Leu	
			140						145					150	
Ser	Thr	Gly	Cys	Ser	Gly	Ile	Leu	Ile	Ser	Pro	Gln	His	Val	Leu	
			155						160					165	
Thr	Ala	Ala	His	Cys	Val	His	Asp	Gly	Lys	Asp	Tyr	Val	Lys	Gly	
			170						175					180	
Ser	Lys	Lys	Leu	Arg	Val	Gly	Leu	Leu	Lys	Met	Arg	Asn	Lys	Ser	
			185						190					195	
Gly	Gly	Lys	Lys	Arg	Arg	Gly	Ser	Lys	Arg	Ser	Arg	Arg	Glu	Ala	
			200						205					210	

Ser Gly Gly Asp	Gln Arg Glu Gly Thr	Arg Glu His Leu Gln Glu
215	220	225
Arg Ala Lys Gly	Gly Arg Arg Arg Lys	Lys Ser Gly Arg Gly Gln
230	235	240
Arg Ile Ala Glu	Gly Arg Pro Ser Phe	Gln Trp Thr Arg Val Lys
245	250	255
Asn Thr His Ile	Pro Lys Gly Trp Ala	Arg Gly Gly Met Gly Asp
260	265	270
Ala Thr Leu Asp	Tyr Asp Tyr Ala Leu	Leu Glu Leu Lys Arg Ala
275	280	285
His Lys Lys Lys	Tyr Met Glu Leu Gly	Ile Ser Pro Thr Ile Lys
290	295	300
Lys Met Pro Gly	Gly Met Ile His Phe	Ser Gly Phe Asp Asn Asp
305	310	315
Arg Ala Asp Gln	Leu Val Tyr Arg Phe	Cys Ser Val Ser Asp Glu
320	325	330
Ser Asn Asp Leu	Leu Tyr Gln Tyr Cys	Asp Ala Glu Ser Gly Ser
335	340	345
Thr Gly Ser Gly	Val Tyr Leu Arg Leu	Lys Asp Pro Asp Lys Lys
350	355	360
Asn Trp Lys Arg	Lys Ile Ile Ala Val	Tyr Ser Gly His Gln Trp
365	370	375
Val Asp Val His	Gly Val Gln Lys Asp	Tyr Asn Val Ala Val Arg
380	385	390
Ile Thr Pro Leu	Lys Tyr Ala Gln Ile	Cys Leu Trp Ile His Gly
395	400	405
Asn Asp Ala Asn	Cys Ala Tyr Gly	
410		

<210> 297

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 297

gcacctgcag gagagagcga aggg 24

<210> 298

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 298  
catcgttccc gtgaatccag aggc 24

<210> 299  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 299  
gaagggaggc cttcctttca gtggaccocgg gtcaagaata cccac 45

<210> 300  
<211> 1869  
<212> DNA  
<213> Homo sapiens

<400> 300  
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ccagtactgg atgtgacagc aggcagagga gcacttagca gcttattcag 100  
tgtccgattc tgattccggc aaggatccaa gcatggaatg ctgccgtcgg 150  
gcaactcctg gcacactgct cctctttctg gctttcctgc tctgagttc 200  
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ctgaggcgct gcctgagcag caagagctgt gaaggaagaa atatccgata 350  
cagaacatgc agtaatgtgg actgcccacc agaagcaggt gatttccgag 400  
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gaatggcttc ctgtgtctaa tgaccctgac aacctatgtt cactcaagtg 500  
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cagaaatttc cagacaaaga gatactgaga atggctggac cactcacagc 950  
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 gtttaaagaa agcagtgtct cactggttgt agctttcatg ggttctgaac 1800  
 taagtgaat catctacca aagctttttg gctctcaaat taaagattga 1850  
 ttagtttcaa aaaaaaaaaa 1869

<210> 301  
 <211> 525  
 <212> PRT  
 <213> Homo sapiens

<400> 301  
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 Leu Ala Phe Leu Leu Leu Ser Ser Arg Thr Ala Arg Ser Glu Glu  
 20 25 30  
 Asp Arg Asp Gly Leu Trp Asp Ala Trp Gly Pro Trp Ser Glu Cys  
 35 40 45  
 Ser Arg Thr Cys Gly Gly Gly Ala Ser Tyr Ser Leu Arg Arg Cys  
 50 55 60



Leu	Ser	Ser	Lys	Ser	Cys	Glu	Gly	Arg	Asn	Ile	Arg	Tyr	Arg	Thr	65	70	75
Cys	Ser	Asn	Val	Asp	Cys	Pro	Pro	Glu	Ala	Gly	Asp	Phe	Arg	Ala	80	85	90
Gln	Gln	Cys	Ser	Ala	His	Asn	Asp	Val	Lys	His	His	Gly	Gln	Phe	95	100	105
Tyr	Glu	Trp	Leu	Pro	Val	Ser	Asn	Asp	Pro	Asp	Asn	Pro	Cys	Ser	110	115	120
Leu	Lys	Cys	Gln	Ala	Lys	Gly	Thr	Thr	Leu	Val	Val	Glu	Leu	Ala	125	130	135
Pro	Lys	Val	Leu	Asp	Gly	Thr	Arg	Cys	Tyr	Thr	Glu	Ser	Leu	Asp	140	145	150
Met	Cys	Ile	Ser	Gly	Leu	Cys	Gln	Ile	Val	Gly	Cys	Asp	His	Gln	155	160	165
Leu	Gly	Ser	Thr	Val	Lys	Glu	Asp	Asn	Cys	Gly	Val	Cys	Asn	Gly	170	175	180
Asp	Gly	Ser	Thr	Cys	Arg	Leu	Val	Arg	Gly	Gln	Tyr	Lys	Ser	Gln	185	190	195
Leu	Ser	Ala	Thr	Lys	Ser	Asp	Asp	Thr	Val	Val	Ala	Leu	Pro	Tyr	200	205	210
Gly	Ser	Arg	His	Ile	Arg	Leu	Val	Leu	Lys	Gly	Pro	Asp	His	Leu	215	220	225
Tyr	Leu	Glu	Thr	Lys	Thr	Leu	Gln	Gly	Thr	Lys	Gly	Glu	Asn	Ser	230	235	240
Leu	Ser	Ser	Thr	Gly	Thr	Phe	Leu	Val	Asp	Asn	Ser	Ser	Val	Asp	245	250	255
Phe	Gln	Lys	Phe	Pro	Asp	Lys	Glu	Ile	Leu	Arg	Met	Ala	Gly	Pro	260	265	270
Leu	Thr	Ala	Asp	Phe	Ile	Val	Lys	Ile	Arg	Asn	Ser	Gly	Ser	Ala	275	280	285
Asp	Ser	Thr	Val	Gln	Phe	Ile	Phe	Tyr	Gln	Pro	Ile	Ile	His	Arg	290	295	300
Trp	Arg	Glu	Thr	Asp	Phe	Phe	Pro	Cys	Ser	Ala	Thr	Cys	Gly	Gly	305	310	315
Gly	Tyr	Gln	Leu	Thr	Ser	Ala	Glu	Cys	Tyr	Asp	Leu	Arg	Ser	Asn	320	325	330
Arg	Val	Val	Ala	Asp	Gln	Tyr	Cys	His	Tyr	Tyr	Pro	Glu	Asn	Ile	335	340	345
Lys	Pro	Lys	Pro	Lys	Leu	Gln	Glu	Cys	Asn	Leu	Asp	Pro	Cys	Pro			

350	355	360
Ala Ser Asp Gly Tyr Lys Gln Ile Met	Pro Tyr Asp Leu Tyr His	
365	370	375
Pro Leu Pro Arg Trp Glu Ala Thr Pro	Trp Thr Ala Cys Ser Ser	
380	385	390
Ser Cys Gly Gly Gly Ile Gln Ser Arg	Ala Val Ser Cys Val Glu	
395	400	405
Glu Asp Ile Gln Gly His Val Thr Ser	Val Glu Glu Trp Lys Cys	
410	415	420
Met Tyr Thr Pro Lys Met Pro Ile Ala	Gln Pro Cys Asn Ile Phe	
425	430	435
Asp Cys Pro Lys Trp Leu Ala Gln Glu	Trp Ser Pro Cys Thr Val	
440	445	450
Thr Cys Gly Gln Gly Leu Arg Tyr Arg	Val Val Leu Cys Ile Asp	
455	460	465
His Arg Gly Met His Thr Gly Gly Cys	Ser Pro Lys Thr Lys Pro	
470	475	480
His Ile Lys Glu Glu Cys Ile Val Pro	Thr Pro Cys Tyr Lys Pro	
485	490	495
Lys Glu Lys Leu Pro Val Glu Ala Lys	Leu Pro Trp Phe Lys Gln	
500	505	510
Ala Gln Glu Leu Glu Glu Gly Ala Ala	Val Ser Glu Glu Pro Ser	
515	520	525

<210> 302  
 <211> 1533  
 <212> DNA  
 <213> Homo sapiens

<400> 302  
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 ctgggcgggg cgctgtggct ggcggcccg cggttcgtgg ggcccagggt 150  
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 cgccgaggag gcggcgggtc agctccgccc cgagctccgc caggccgcgg 350  
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 tccagtgtcc ttacatgaag actgaagatg ggtttgagat gcagttcgga 550  
 gtgaaccatc tggggcactt tctactcacc aatctttctcc ttggactcct 600  
 caaaagttca gctcccagca ggattgtggt agttttcttcc aaactttata 650  
 aatacggaga catcaatttt gatgacttga acagtgaaca aagctataat 700  
 aaaagctttt gttatagccg gagcaaaactg gctaacattc tttttaccag 750  
 ggaactagcc cgccgcttag aaggcacaaa tgtcaccgtc aatgtgttgc 800  
 atcctggtat tgtacggaca aatctgggga ggcacataca cattccactg 850  
 ttggtcaaac cactcttcaa tttggtgtca tgggcttttt tcaaaaactcc 900  
 agtagaaggt gccagactt ccattttattt ggcctcttca cctgaggtag 950  
 aaggagtgtc aggaagatac tttggggatt gtaaagagga agaactgttg 1000  
 cccaaagcta tggatgaatc tgttgcaaga aaactctggg atatcagtga 1050  
 agtgatggtt ggcctgctaa aataggaaca aggagtaaaa gagctgttta 1100  
 taaaactgca tatcagttat atctgtgatc aggaatggtg tggattgaga 1150  
 acttgttact tgaagaaaaa gaattttgat attggaatag cctgctaaga 1200  
 ggtacatgtg ggtatttttg agttactgaa aaattatttt tgggataaga 1250  
 gaatttcagc aaagatgttt taaatatata tagtaagtat aatgaataat 1300  
 aagtacaatg aaaaatacaa ttatattgta aaattataac tgggcaagca 1350  
 tggatgacat attaataattt gtcagaatta agtgactcaa agtgctatcg 1400  
 agagggtttt caagtatctt tgagtttcat ggccaaagtg ttaactagtt 1450  
 ttactacaat gtttggtgtt tgtgtggaaa ttatctgcct ggtgtgtgca 1500  
 cacaagtctt acttgaata aatttactgg tac 1533

<210> 303

<211> 336

<212> PRT

<213> Homo sapiens

<400> 303

Met	Ala	Val	Ala	Thr	Ala	Ala	Ala	Val	Leu	Ala	Ala	Leu	Gly	Gly
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Ala	Leu	Trp	Leu	Ala	Ala	Arg	Arg	Phe	Val	Gly	Pro	Arg	Val	Gln
			20					25					30	
Arg	Leu	Arg	Arg	Gly	Gly	Asp	Pro	Gly	Leu	Met	His	Gly	Lys	Thr
			35					40					45	



<210> 304  
 <211> 521  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 20, 34, 62, 87, 221, 229  
 <223> unknown base

<400> 304  
 ggggattgta aagaggaagn actgtgccca aagntatgga tgaatctgtt 50  
 gcaagaaaat tntgggatat cagtgaagtg atgggtngcc tgctaaaata 100  
 ggaacaagga gtaaaagagc tgtttataaa actgcatatc agttatatct 150  
 gtgatcagga atgggtgtgga ttgagaactt gttacttgaa gaaaaagaat 200  
 tttgatattg gaatagcctg ntaagaggna catgtgggta ttttggagtt 250  
 actgaaaaat tatttttggg ataagagaat ttcagcaaag atgtttttaa 300  
 tatatatagt aagtataatg aataataagt acaatgaaaa atacaattat 350  
 attgtaaaat tataactggg caagcatgga tgacatatta atatttgtca 400  
 gaattaagtg actcaaagtg ctatcgagag gtttttcaag tatctttgag 450  
 tttcatggcc aaagtgttaa ctagttttac tacaatgttt ggtgtttgtg 500  
 tggaaattat ctgcctggct t 521

<210> 305  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 305  
 ccaggaaatg ctccaggaag agcc 24

<210> 306  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 306  
 gcccatgaca ccaaattgaa gagtgg 26

<210> 307

<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 307  
aacgcaggga tcttccagtg cccttacatg aagactgaag atggg 45

<210> 308  
<211> 1523  
<212> DNA  
<213> Homo sapiens

<400> 308  
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ccagcgctg tccctgtcac ggaccccagc gttaccatgc atcctgccgt 150  
cttcctatcc ttaccgcacc tcagatgctc ccttctgctc ctggtaactt 200  
gggtttttac tcctgtaaca actgaaataa caagtcttgc tacagagaat 250  
atagatgaaa ttttaaacia tgctgatgtt gcttttagtaa atttttatgc 300  
tgactgggtg cgtttcagtc agatgttgca tccaattttt gaggaagctt 350  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 400  
agagttgatt gtgatcagca ctctgacata gcccagagat acaggataag 450  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 500  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggcaa 550  
caaaaaagtg accccattca agaaattcgg gacttagcag aaatcaccac 600  
tcttgatcgc agcaaaaagaa atatcattgg atattttgag caaaaggact 650  
cggacaacta tagagttttt gaacgagtag cgaatatttt gcatgatgac 700  
tgtgcctttc tttctgcatt tggggatgtt tcaaaaaccg aaagatatag 750  
tggcgacaac ataatctaca aaccaccagg gcattctgct ccggatatgg 800  
tgtacttggg agctatgaca aattttgatg tgacttacia ttggattcaa 850  
gataaatgtg ttctcttctg ccgagaaata acatttgaaa atggagagga 900  
attgacagaa gaaggactgc cttttctcat actctttcac atgaaagaag 950  
atacagaaag tttagaaata ttccagaatg aagtagctcg gcaattaata 1000  
agtgaaaaag gtacaataaa ctttttacat gccgattgtg acaaatttag 1050

acatcctctt ctgcacatac agaaaactcc agcagattgt cctgtaatcg 1100  
 ctattgacag ctttaggcac atgtatgtgt ttggagactt caaagatgta 1150  
 ttaattcctg gaaaactcaa gcaattcgta tttgacttac attctggaaa 1200  
 actgcacaga gaattccatc atggacctga cccaactgat acagccccag 1250  
 gagagcaagc ccaagatgta gcaagcagtc cacctgagag ctccttccag 1300  
 aaactagcac ccagtgaata taggtatact ctattgaggg atcgagatga 1350  
 gctttaaaaaa cttgaaaaac agtttgtaag cctttcaaca gcagcatcaa 1400  
 cctacgtggt ggaaatagta aacctatatt ttcataattc tatgtgtatt 1450  
 tttattttga ataaacagaa agaaatttaa aaaaaaaaaa aaaaaaaaaa 1500  
 aaaaaaaaaa aaaaaaaaaa aaa 1523

<210> 309  
 <211> 406  
 <212> PRT  
 <213> Homo sapiens

<400> 309  
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 1 5 10 15  
 Leu Leu Leu Leu Val Thr Trp Val Phe Thr Pro Val Thr Thr Glu  
 20 25 30  
 Ile Thr Ser Leu Ala Thr Glu Asn Ile Asp Glu Ile Leu Asn Asn  
 35 40 45  
 Ala Asp Val Ala Leu Val Asn Phe Tyr Ala Asp Trp Cys Arg Phe  
 50 55 60  
 Ser Gln Met Leu His Pro Ile Phe Glu Glu Ala Ser Asp Val Ile  
 65 70 75  
 Lys Glu Glu Phe Pro Asn Glu Asn Gln Val Val Phe Ala Arg Val  
 80 85 90  
 Asp Cys Asp Gln His Ser Asp Ile Ala Gln Arg Tyr Arg Ile Ser  
 95 100 105  
 Lys Tyr Pro Thr Leu Lys Leu Phe Arg Asn Gly Met Met Met Lys  
 110 115 120  
 Arg Glu Tyr Arg Gly Gln Arg Ser Val Lys Ala Leu Ala Asp Tyr  
 125 130 135  
 Ile Arg Gln Gln Lys Ser Asp Pro Ile Gln Glu Ile Arg Asp Leu  
 140 145 150  
 Ala Glu Ile Thr Thr Leu Asp Arg Ser Lys Arg Asn Ile Ile Gly  
 155 160 165

Tyr Phe Glu Gln Lys Asp Ser Asp Asn Tyr Arg Val Phe Glu Arg	170	175	180
Val Ala Asn Ile Leu His Asp Asp Cys Ala Phe Leu Ser Ala Phe	185	190	195
Gly Asp Val Ser Lys Pro Glu Arg Tyr Ser Gly Asp Asn Ile Ile	200	205	210
Tyr Lys Pro Pro Gly His Ser Ala Pro Asp Met Val Tyr Leu Gly	215	220	225
Ala Met Thr Asn Phe Asp Val Thr Tyr Asn Trp Ile Gln Asp Lys	230	235	240
Cys Val Pro Leu Val Arg Glu Ile Thr Phe Glu Asn Gly Glu Glu	245	250	255
Leu Thr Glu Glu Gly Leu Pro Phe Leu Ile Leu Phe His Met Lys	260	265	270
Glu Asp Thr Glu Ser Leu Glu Ile Phe Gln Asn Glu Val Ala Arg	275	280	285
Gln Leu Ile Ser Glu Lys Gly Thr Ile Asn Phe Leu His Ala Asp	290	295	300
Cys Asp Lys Phe Arg His Pro Leu Leu His Ile Gln Lys Thr Pro	305	310	315
Ala Asp Cys Pro Val Ile Ala Ile Asp Ser Phe Arg His Met Tyr	320	325	330
Val Phe Gly Asp Phe Lys Asp Val Leu Ile Pro Gly Lys Leu Lys	335	340	345
Gln Phe Val Phe Asp Leu His Ser Gly Lys Leu His Arg Glu Phe	350	355	360
His His Gly Pro Asp Pro Thr Asp Thr Ala Pro Gly Glu Gln Ala	365	370	375
Gln Asp Val Ala Ser Ser Pro Pro Glu Ser Ser Phe Gln Lys Leu	380	385	390
Ala Pro Ser Glu Tyr Arg Tyr Thr Leu Leu Arg Asp Arg Asp Glu	395	400	405

Leu

<210> 310  
 <211> 182  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure



<222> 36, 48  
<223> unknown base

<400> 310  
attaaggaag aatttcctaaa tgaaaatcaa gtagtntttg ccagagtnga 50  
ttgtgatcag cactctgaca tagcccagag atacaggata agcaaatacc 100  
caaccctcaa attgtttcgt aatgggatga tgatgaagag agaatacagg 150  
ggtcagcgat cagtgaagc attggcagat ta 182

<210> 311  
<211> 598  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 38, 59, 140, 169, 174, 183, 282-283, 294-295, 319, 396  
<223> unknown base

<400> 311  
agaggcctct ctggaagttg tcccgggtgt tcgccgcnng agcccgggtc 50  
gagaggacna ggtgccgctg cctggagaat cctccgctgc cgtcggctcc 100  
cggagcccag ccttttcta acccaaccca acctagccn gtcccagccg 150  
ccagcgctg tccctgtcnc gganccagc gtnaccatgc atcctgccgt 200  
cttcctatcc ttaccgacc tcagatgctc ccttctgctc ctggtaactt 250  
gggtttttac tctgtaaca actgaaataa cnngtcttga tacnnagaat 300  
atagatgaaa ttttaaacna tgctgatgtg gctttagtca atttttatgc 350  
tgactgggtg cgtttcagtc agatgtggca tccaattttt gaggangctt 400  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 450  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 500  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 550  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggc 598

<210> 312  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 312  
tgagaggcct ctctggaagt tg 22

<210> 313  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 313  
 gtcagcgatc agtgaaagc 19  
  
 <210> 314  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 314  
 ccagaatgaa gtagctcggc 20  
  
 <210> 315  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 315  
 ccgactcaaa atgcattgtc 20  
  
 <210> 316  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 316  
 catttggcag gaattgtcc 19  
  
 <210> 317  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 317  
 ggtgctatag gccaaagg 18  
  
 <210> 318  
 <211> 24  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 318

ctgtatctct gggctatgtc agag 24

<210> 319

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 319

ctacatataa tggcacatgt cagcc 25

<210> 320

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 320

cgtcttccta tccttacccg acctcagatg ctcccttctg ctctctg 46

<210> 321

<211> 1333

<212> DNA

<213> Homo sapiens

<400> 321

gcccacgcgt ccgatggcgt tcacgttcgc ggccttctgc tacatgctgg 50

cgctgctgct cactgccgcg ctcatcttct tcgccatttg gcacattata 100

gcatttgatg agctgaagac tgattacaag aatcctatag accagtgtaa 150

taccctgaat ccccttgtag tcccagagta cctcatccac gctttcttct 200

gtgtcatgtt tctttgtgca gcagagtggc ttacactggg tctcaatatg 250

cccctcttgg catatcatat ttggaggat atgagtagac cagtgatgag 300

tggcccagga ctctatgacc ctacaacat catgaatgca gatattctag 350

catattgtca gaaggaagga tgggtgcaaat tagcttttta tcttctagca 400

tttttttact acctatatgg catgatctat gttttggtga gctcttagaa 450

caacacacag aagaattggg ccagttaagt gcatgcaaaa agccacaaa 500

tgaagggatt ctatccagca agatcctgtc caagagtagc ctgtggaatc 550

tgatcagtta ctttaaaaaa tgactcctta ttttttaaat gtttccacat 600  
 ttttgcttgt ggaaagactg ttttcatatg ttataactcag ataaagattt 650  
 taaatgggtat tacgtataaaa ttaatatataa atgattacct ctgggtgttga 700  
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 gctgtagata tcaggtgctt ctgatgaagt gaaaatgtat atctgactag 900  
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 ttttatttgt aagacattac ttattaagaa attgggttatt atgcttactg 1200  
 ttctaactcg gtggtaaagg tattcttaag aatttgcagg tactacagat 1250  
 tttcaaaact gaatgagaga aaattgtata accatcctgc tgttccttta 1300  
 gtgcaataca ataaaactct gaaattaaga ctc 1333

<210> 322

<211> 144

<212> PRT

<213> Homo sapiens

<400> 322

Met	Ala	Phe	Thr	Phe	Ala	Ala	Phe	Cys	Tyr	Met	Leu	Ala	Leu	Leu
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Leu	Thr	Ala	Ala	Leu	Ile	Phe	Phe	Ala	Ile	Trp	His	Ile	Ile	Ala
				20					25					30
Phe	Asp	Glu	Leu	Lys	Thr	Asp	Tyr	Lys	Asn	Pro	Ile	Asp	Gln	Cys
				35					40					45
Asn	Thr	Leu	Asn	Pro	Leu	Val	Leu	Pro	Glu	Tyr	Leu	Ile	His	Ala
				50					55					60
Phe	Phe	Cys	Val	Met	Phe	Leu	Cys	Ala	Ala	Glu	Trp	Leu	Thr	Leu
				65					70					75
Gly	Leu	Asn	Met	Pro	Leu	Leu	Ala	Tyr	His	Ile	Trp	Arg	Tyr	Met
				80					85					90
Ser	Arg	Pro	Val	Met	Ser	Gly	Pro	Gly	Leu	Tyr	Asp	Pro	Thr	Thr
				95					100					105

Ile Met Asn Ala Asp Ile Leu Ala Tyr Cys Gln Lys Glu Gly Trp  
110 115 120

Cys Lys Leu Ala Phe Tyr Leu Leu Ala Phe Phe Tyr Tyr Leu Tyr  
125 130 135

Gly Met Ile Tyr Val Leu Val Ser Ser  
140

<210> 323

<211> 477

<212> DNA

<213> Homo sapiens

<400> 323

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atatgcccct cttggcatat catatttgga ggtatatgag tagaccagtg 200

atgagtggcc caggactcta tgaccctaca accatcatga atgcagatat 250

tctagcatat tgtcagaagg aaggatgggtg caaattagct ttttatcttc 300

tagcattttt ttactaccta tatggcatga tctatgtttt ggtgagctct 350

tagaacaaca cacagaagaa ttgggtccagt taagtgcag caaaaagcca 400

ccaaatgaag ggattctatc cagcaagatc ctgtccaaga gtagcctgtg 450

gaatctgac agttacttta aaaaatg 477

<210> 324

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 325

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 325

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 326

<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 326  
gtgcagcaga gtggcttaca 20

<210> 327  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 327  
actggaccaa ttcttctgtg 20

<210> 328  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 328  
gatattctag catattgtca gaaggaagga tgggtgcaaat tagct 45

<210> 329  
<211> 1174  
<212> DNA  
<213> Homo sapiens

<400> 329  
cggacgcgtg ggggaaaccc ttccgagaaa acagcaacaa gctgagctgc 50  
tgtgacagag ggggaacaaga tggcggcgcc gaaggggagc ctctgggtga 100  
ggaccaact ggggctcccg ccgctgctgc tgctgaccat ggccttggcc 150  
ggagggttcgg ggaccgcttc ggctgaagca tttgactcgg tcttgggtga 200  
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tcaatttgtc agtttgtgga tgatggaatt gacttaaadc gaactaaatt 350  
ggaatgtgaa tctgcatgta cagaagcata ttcccaatct gatgagcaat 400  
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caagaacaac ttatgtccct gatgccaaaa atgcacctac tctttcctct 500

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<210> 330

<211> 323

<212> PRT

<213> Homo sapiens

<400> 330

Met	Ala	Ala	Pro	Lys	Gly	Ser	Leu	Trp	Val	Arg	Thr	Gln	Leu	Gly	1	5	10	15
Leu	Pro	Pro	Leu	Leu	Leu	Leu	Thr	Met	Ala	Leu	Ala	Gly	Gly	Ser	20	25	30	
Gly	Thr	Ala	Ser	Ala	Glu	Ala	Phe	Asp	Ser	Val	Leu	Gly	Asp	Thr	35	40	45	
Ala	Ser	Cys	His	Arg	Ala	Cys	Gln	Leu	Thr	Tyr	Pro	Leu	His	Thr	50	55	60	
Tyr	Pro	Lys	Glu	Glu	Glu	Leu	Tyr	Ala	Cys	Gln	Arg	Gly	Cys	Arg	65	70	75	
Leu	Phe	Ser	Ile	Cys	Gln	Phe	Val	Asp	Asp	Gly	Ile	Asp	Leu	Asn	80	85	90	
Arg	Thr	Lys	Leu	Glu	Cys	Glu	Ser	Ala	Cys	Thr	Glu	Ala	Tyr	Ser	95	100	105	
Gln	Ser	Asp	Glu	Gln	Tyr	Ala	Cys	His	Leu	Gly	Cys	Gln	Asn	Gln	110	115	120	

Leu	Pro	Phe	Ala	Glu	Leu	Arg	Gln	Glu	Gln	Leu	Met	Ser	Leu	Met	
				125					130					135	
Pro	Lys	Met	His	Leu	Leu	Phe	Pro	Leu	Thr	Leu	Val	Arg	Ser	Phe	
				140					145					150	
Trp	Ser	Asp	Met	Met	Asp	Ser	Ala	Gln	Ser	Phe	Ile	Thr	Ser	Ser	
				155					160					165	
Trp	Thr	Phe	Tyr	Leu	Gln	Ala	Asp	Asp	Gly	Lys	Ile	Val	Ile	Phe	
				170					175					180	
Gln	Ser	Lys	Pro	Glu	Ile	Gln	Tyr	Ala	Pro	His	Leu	Glu	Gln	Glu	
				185					190					195	
Pro	Thr	Asn	Leu	Arg	Glu	Ser	Ser	Leu	Ser	Lys	Met	Ser	Tyr	Leu	
				200					205					210	
Gln	Met	Arg	Asn	Ser	Gln	Ala	His	Arg	Asn	Phe	Leu	Glu	Asp	Gly	
				215					220					225	
Glu	Ser	Asp	Gly	Phe	Leu	Arg	Cys	Leu	Ser	Leu	Asn	Ser	Gly	Trp	
				230					235					240	
Ile	Leu	Thr	Thr	Thr	Leu	Val	Leu	Ser	Val	Met	Val	Leu	Leu	Trp	
				245					250					255	
Ile	Cys	Cys	Ala	Thr	Val	Ala	Thr	Ala	Val	Glu	Gln	Tyr	Val	Pro	
				260					265					270	
Ser	Glu	Lys	Leu	Ser	Ile	Tyr	Gly	Asp	Leu	Glu	Phe	Met	Asn	Glu	
				275					280					285	
Gln	Lys	Leu	Asn	Arg	Tyr	Pro	Ala	Ser	Ser	Leu	Val	Val	Val	Arg	
				290					295					300	
Ser	Lys	Thr	Glu	Asp	His	Glu	Glu	Ala	Gly	Pro	Leu	Pro	Thr	Lys	
				305					310					315	
Val	Asn	Leu	Ala	His	Ser	Glu	Ile								
				320											

<210> 331

<211> 350

<212> DNA

<213> Homo sapiens

<400> 331

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gcacacctac cctaaggaag aggagttgta cgcattgtcag agaggttgca 100
ggctgttttc aatttgtcag tttgtggatg atggaattga cttaaactga 150
actaaattgg aatgtgaatc tgcattgtaca gaagcatatt cccaatctga 200
tgagcaatat gcttgccatc ttggttgcca gaatcagctg ccattcgtg 250

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aactgagaca agaacaactt atgtccctga tgccaaaaat gcacctactc 300  
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<210> 332  
<211> 562  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 47  
<223> unknown base

<400> 332  
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aaacagcaac aagctgagct gctgtgacag agggaacaag atggcggcgc 100  
cgaaggagc ctttgggtga ggaccaact ggggctcccg ccgctgctgc 150  
tgctgaccat ggccttgcc ggaggctcgg ggaccgcttc ggctgaagca 200  
tttgactcgg tcttgggtga tacggcgtct tgccaccggg cctgtcagtt 250  
gacctacccc ttgcacacct accctaagga agaggagttg tacgcatgtc 300  
agagagggtg caggctgttt tcaatttgct agtttggtga tgatggaatt 350  
gacttaaatt gaactaaatt ggaatgtgaa tctgcatgta cagaagcata 400  
ttcccaatct gatgagcaat atgcttgcca tcttggttgc cagaatcagc 450  
tgccattcgc tgaactgaga caagaacaac ttatgtccct gatgcaaaa 500  
atgcacctac tcttccctct aactctggtg aggtcattct ggagtgcacat 550  
gatggactcc gc 562

<210> 333  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 333  
acaagctgag ctgctgtgac ag 22

<210> 334  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 334  
tgattcttggc aaccaagatg gc 22

<210> 335  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 335  
atggccttgg cggaggttc ggggaccgct tcggctgaag 40

<210> 336  
<211> 1885  
<212> DNA  
<213> Homo sapiens

<400> 336  
gcgaggtggc gatcgtgag aggcaggagg gccgaggcgg gcctgggagg 50  
cgccccggag gtggggcgcc gctggggccg gcccgcacgg gcttcattctg 100  
aggcgccacg gcccgcgacc gagcgtgcgg actggcctcc caagcgtggg 150  
gcgacaagct gccggagctg caatgggccc cggtctggga ttcttggttg 200  
gcctcctggg cgccgtgtgg ctgctcagct cgggccacgg agaggagcag 250  
cccccgaga cagcggcaca gaggtgcttc tgccagggtta gtggttactt 300  
ggatgattgt acctgtgatg ttgaaacctat tgatagattt aataactaca 350  
ggctttttccc aagactacaa aaacttcttg aaagtgacta ctttaggtat 400  
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 1885

<210> 337  
 <211> 468  
 <212> PRT  
 <213> Homo sapiens

<400> 337  
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 Trp Leu Leu Ser Ser Gly His Gly Glu Gln Pro Pro Glu Thr  
 20 25 30  
 Ala Ala Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp  
 35 40 45  
 Cys Thr Cys Asp Val Glu Thr Ile Asp Arg Phe Asn Asn Tyr Arg  
 50 55 60  
 Leu Phe Pro Arg Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg  
 65 70 75

Tyr	Tyr	Lys	Val	Asn	Leu	Lys	Arg	Pro	Cys	Pro	Phe	Trp	Asn	Asp	
				80					85					90	
Ile	Ser	Gln	Cys	Gly	Arg	Arg	Asp	Cys	Ala	Val	Lys	Pro	Cys	Gln	
				95					100					105	
Ser	Asp	Glu	Val	Pro	Asp	Gly	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Tyr	
				110					115					120	
Ser	Glu	Glu	Ala	Asn	Asn	Leu	Ile	Glu	Glu	Cys	Glu	Gln	Ala	Glu	
				125					130					135	
Arg	Leu	Gly	Ala	Val	Asp	Glu	Ser	Leu	Ser	Glu	Glu	Thr	Gln	Lys	
				140					145					150	
Ala	Val	Leu	Gln	Trp	Thr	Lys	His	Asp	Asp	Ser	Ser	Asp	Asn	Phe	
				155					160					165	
Cys	Glu	Ala	Asp	Asp	Ile	Gln	Ser	Pro	Glu	Ala	Glu	Tyr	Val	Asp	
				170					175					180	
Leu	Leu	Leu	Asn	Pro	Glu	Arg	Tyr	Thr	Gly	Tyr	Lys	Gly	Pro	Asp	
				185					190					195	
Ala	Trp	Lys	Ile	Trp	Asn	Val	Ile	Tyr	Glu	Glu	Asn	Cys	Phe	Lys	
				200					205					210	
Pro	Gln	Thr	Ile	Lys	Arg	Pro	Leu	Asn	Pro	Leu	Ala	Ser	Gly	Gln	
				215					220					225	
Gly	Thr	Ser	Glu	Glu	Asn	Thr	Phe	Tyr	Ser	Trp	Leu	Glu	Gly	Leu	
				230					235					240	
Cys	Val	Glu	Lys	Arg	Ala	Phe	Tyr	Arg	Leu	Ile	Ser	Gly	Leu	His	
				245					250					255	
Ala	Ser	Ile	Asn	Val	His	Leu	Ser	Ala	Arg	Tyr	Leu	Leu	Gln	Glu	
				260					265					270	
Thr	Trp	Leu	Glu	Lys	Lys	Trp	Gly	His	Asn	Ile	Thr	Glu	Phe	Gln	
				275					280					285	
Gln	Arg	Phe	Asp	Gly	Ile	Leu	Thr	Glu	Gly	Glu	Gly	Pro	Arg	Arg	
				290					295					300	
Leu	Lys	Asn	Leu	Tyr	Phe	Leu	Tyr	Leu	Ile	Glu	Leu	Arg	Ala	Leu	
				305					310					315	
Ser	Lys	Val	Leu	Pro	Phe	Phe	Glu	Arg	Pro	Asp	Phe	Gln	Leu	Phe	
				320					325					330	
Thr	Gly	Asn	Lys	Ile	Gln	Asp	Glu	Glu	Asn	Lys	Met	Leu	Leu	Leu	
				335					340					345	
Glu	Ile	Leu	His	Glu	Ile	Lys	Ser	Phe	Pro	Leu	His	Phe	Asp	Glu	
				350					355					360	
Asn	Ser	Phe	Phe	Ala	Gly	Asp	Lys	Lys	Glu	Ala	His	Lys	Leu	Lys	

365	370	375
Glu Asp Phe Arg Leu His Phe Arg Asn Ile Ser Arg Ile Met Asp		
380	385	390
Cys Val Gly Cys Phe Lys Cys Arg Leu Trp Gly Lys Leu Gln Thr		
395	400	405
Gln Gly Leu Gly Thr Ala Leu Lys Ile Leu Phe Ser Glu Lys Leu		
410	415	420
Ile Ala Asn Met Pro Glu Ser Gly Pro Ser Tyr Glu Phe His Leu		
425	430	435
Thr Arg Gln Glu Ile Val Ser Leu Phe Asn Ala Phe Gly Arg Ile		
440	445	450
Ser Thr Ser Val Lys Glu Leu Glu Asn Phe Arg Asn Leu Leu Gln		
455	460	465

Asn Ile His

<210> 338  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 101, 263, 376, 397, 426  
 <223> unknown base

<400> 338  
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 nacacttttt acagttggct agaaggtctc tgtgtagaaa aaagagcatt 150  
 ctacagactt atatctggcc tacatgcaag cattaatgtg catttgagtg 200  
 caagatatct tttaacagag acctgggttag aaaagaaatg gggacacaac 250  
 attacagaat ttnaacagcg atttgatgga attttgactg aaggagaagg 300  
 tccaagaagg cttaagaact tgtattttct ctacttaata gaactaaggg 350  
 ctttatccaa agtgttacca ttcttngagc gccagattt tcaactnttt 400  
 actggaaata aaattcagga tgaggnaaac aaaatgttac ttttggaat 450  
 acttcatgaa atcaagtcac ttcttttgca ttttgatgag aattcatttt 500  
 tttgctg 507

<210> 339  
 <211> 20

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 339  
aagctgccgg agctgcaatg 20

<210> 340  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 340  
ttgcttctta atcctgagcg c 21

<210> 341  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 341  
aaaggaggac tttcgactgc 20

<210> 342  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 342  
agagattcat ccactgctcc aagtcg 26

<210> 343  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 343  
tgtccagaaa caggcacata tcagc 25

<210> 344  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 344

agacagcggc acagaggtgc ttctgccagg ttagtggtta cttggatgat 50

<210> 345

<211> 1486

<212> DNA

<213> Homo sapiens

<400> 345

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ggactttctca tactggacag aaaccgatca ggcatggaac tccccttcgt 150

cactcacctg ttcttgcccc tgggtgttct gacaggtctc tgctccccct 200

ttaacctgga tgaacatcac ccacgcctat tcccagggcc accagaagct 250

gaatttggat acagtgtctt acaacatggt gggggtggac agcgatggat 300

gctggtgggc gccccctggg atgggccttc aggcgaccgg aggggggacg 350

tttatcgctg cctgtaggg ggggcccaca atgccccatg tgccaagggc 400

cacttaggtg actaccaact gggaaattca tctcatcctg ctgtgaatat 450

gcacctgggg atgtctctgt tagagacaga tggatgatgg ggattcatgg 500

tgagctaagg agagggtggt ggcagtgtct ctgaaggtcc ataaaagaaa 550

aaagagaagt gtggttaaggg aaaatggtct gtgtggaggg gtcaaggagt 600

taaaaaccct agaaagcaaa aggtaggtaa tgtcaggagg tagtcttcac 650

gcctccttca actgggagca tgttctgagg gtgccctccc aagcctggga 700

gtaactatatt ccccatcccc caggcctgtg cccctctctg gtctcgtgct 750

tgtggcagct ctgtcttcag ttctgggata tgtgcccgtg tggatgcttc 800

attccagcct cagggaagcc tggcaccac tgccaacgt gagccagagg 850

aaggctgagt acttggttcc cagaaggaga tactgggtgg gaaaaagatg 900

gggcaaagcg gtatgatgcc tggcaaaggg cctgcatggc tatectcatt 950

gctacctaat gtgcttgcaa aagctccatg tttcctaaca gattcagact 1000

cctggccagg tgtggtggcc cacacctgta attctagcac tttgggaggc 1050

caaggtgggc agatcacttg aggtcaggag ttcaagacca gcctggccaa 1100

catggtgaaa ctccatctct actaaaaaaa aaaaaatata aaaattagct 1150

ggggtgcgcta gtgcatgcct gtaatctcat ctactcggga ggctaagaca 1200  
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 agaaagaccc catctctaaa taaatgtttt aaaaat 1486

<210> 346  
 <211> 124  
 <212> PRT  
 <213> Homo sapiens

<400> 346  
 Met Glu Leu Pro Phe Val Thr His Leu Phe Leu Pro Leu Val Phe  
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 Leu Thr Gly Leu Cys Ser Pro Phe Asn Leu Asp Glu His His Pro  
 20 25 30  
 Arg Leu Phe Pro Gly Pro Pro Glu Ala Glu Phe Gly Tyr Ser Val  
 35 40 45  
 Leu Gln His Val Gly Gly Gly Gln Arg Trp Met Leu Val Gly Ala  
 50 55 60  
 Pro Trp Asp Gly Pro Ser Gly Asp Arg Arg Gly Asp Val Tyr Arg  
 65 70 75  
 Cys Pro Val Gly Gly Ala His Asn Ala Pro Cys Ala Lys Gly His  
 80 85 90  
 Leu Gly Asp Tyr Gln Leu Gly Asn Ser Ser His Pro Ala Val Asn  
 95 100 105  
 Met His Leu Gly Met Ser Leu Leu Glu Thr Asp Gly Asp Gly Gly  
 110 115 120  
 Phe Met Val Ser

<210> 347  
 <211> 509  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 22  
 <223> unknown base

<400> 347



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 ttgccattgg gagggggcag gatgggaggg aaagtgaaga aaacagaaaa 100  
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 ggcatggaac tccccttcgt cactcacctg ttcttgcccc tgggtgttct 200  
 gacaggtctc tgctccccct ttaacctgga tgaacatcac ccacgcctat 250  
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 gggggtggac agcgatggat gctggtgggc gccccctggg atgggccttc 350  
 aggcgaccgg agggggggacg tttatcgctg ccctgtaggg ggggcccaca 400  
 atgccccatg tgccaagggc cacttaggtg actaccaact gggaaattca 450  
 tctcatcctg ctgtgaatat gcacctgggg atgtctctgt tagagacaga 500  
 tggatgatgg 509

<210> 348

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 348

agggacagag gccagaggac ttc 23

<210> 349

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 349

caggtgcata ttcacagcag gatg 24

<210> 350

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 350

ggaactcccc ttcgtcactc acctgttctt gcccttggtg ttcct 45

<210> 351

<211> 2056

<212> DNA

<213> Homo sapiens

<400> 351

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gcttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150  
tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
gctttatattt ggaaagaaac aatgttctag gtcaaactga gtctacaaa 250  
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tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350  
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 aaaaaa 2056

<210> 352  
 <211> 311  
 <212> PRT  
 <213> Homo sapiens

<400> 352  
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 Phe Met Trp Phe Phe Tyr Ala Leu Ile Pro Cys Leu Leu Thr Asp  
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 Glu Val Ala Ile Leu Pro Ala Pro Gln Asn Leu Ser Val Leu Ser  
 35 40 45  
 Thr Asn Met Lys His Leu Leu Met Trp Ser Pro Val Ile Ala Pro  
 50 55 60  
 Gly Glu Thr Val Tyr Tyr Ser Val Glu Tyr Gln Gly Glu Tyr Glu  
 65 70 75  
 Ser Leu Tyr Thr Ser His Ile Trp Ile Pro Ser Ser Trp Cys Ser  
 80 85 90  
 Leu Thr Glu Gly Pro Glu Cys Asp Val Thr Asp Asp Ile Thr Ala  
 95 100 105  
 Thr Val Pro Tyr Asn Leu Arg Val Arg Ala Thr Leu Gly Ser Gln  
 110 115 120

Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser	
				125					130					135	
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe	
				140					145					150	
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe	
				155					160					165	
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val	
				170					175					180	
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met	
				185					190					195	
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys	
				200					205					210	
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu	
				215					220					225	
Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	
				230					235					240	
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	
				245					250					255	
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	
				260					265					270	
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	
				275					280					285	
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	
				290					295					300	
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					
				305					310						

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 <211> 864  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 654, 711, 748, 827  
 <223> unknown base

<400> 353  
 tcctgctgat gcacatctgg gtttgccaaa aggaggttgc ttcgagccgc 50  
 cctttctagc ttcttgccg gctctagaac aattcaggct tcgctgcgac 100  
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150  
 agaatgcttt attttgaaa gaaacaatgt tctaggtcaa actgagtcta 200

ccaaatgcag actttcaciaa tggttctaga agaaatctgg acaagtcttt 250  
 tcatgtgggt tttctacgca ttgattccat gtttgctcac agatgaagtg 300  
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350  
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
 attctgtcga ataccagggg gagtaogaga gcctgtacac gagccacatc 450  
 tggatcccca gcagctgggt ctcaactcact gaaggctctg agtgtgatgt 500  
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcaggggcca 550  
 cattgggctc acagacctca gcctggagca tccctgaagca tccctttaat 600  
 agaaactcaa ccatacttac ccgacctggg atggagatca ccaaagatgg 650  
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700  
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
 gaacccttg cggccgctgg ggtatctctc gagaaaagag agggccaata 800  
 tgaccacat actcaatatg gacgaantgc tattgtccac ctgtttgagt 850  
 ggcgctgggt tgat 864

<210> 354  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 354  
 aggcttcgct gcgactagac ctc 23

<210> 355  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 355  
 ccaggtcggg taaggatggg tgag 24

<210> 356  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 356  
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 357

<211> 1670

<212> DNA

<213> Homo sapiens

<400> 357

cccacgcgtc cgcccacgcg tccgagggac aagagagaag agagactgaa 50  
acagggagaa gaggcaggag aggaggaggt ggggagagca cgaagctgga 100  
ggccgacact gagggagggc gggaggaggt gaagaaggag agaggggaga 150  
agaggcagga gctggaaagg agagagggag gaggaggagg agatgcggga 200  
tggagacctg gagttaggtg gcttgggaga gcttaatgaa aagagaacgg 250  
agaggaggtg tgggttagga accaagaggt agccctgtgg gcagcagaag 300  
gctgagagga gtaggaagat caggagctag agggagactg gagggttccg 350  
ggaaaagagc agaggaaaga ggaaagacac agagagacgg gagagagaag 400  
aagagtgggt ttgaagggcg gatctcagtc cctggctgct ttggcatttg 450  
gggaactggg actccctgtg gggaggagag gaaagctgga agtcctggag 500  
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<210> 358  
 <211> 328  
 <212> PRT  
 <213> Homo sapiens

<400> 358  
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 Trp Ala Ala Leu Gly Ala Ala Ala His Ile Gly Pro Ala Pro Asp  
 20 25 30  
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 35 40 45  
 Val Pro Gly Pro Pro Phe Trp Gly Leu Val Asn Ala Ala Trp Ser  
 50 55 60  
 Leu Cys Ala Val Gly Lys Arg Gln Ser Pro Val Asp Val Glu Leu  
 65 70 75  
 Lys Arg Val Leu Tyr Asp Pro Phe Leu Pro Pro Leu Arg Leu Ser  
 80 85 90  
 Thr Gly Gly Glu Lys Leu Arg Gly Thr Leu Tyr Asn Thr Gly Arg  
 95 100 105  
 His Val Ser Phe Leu Pro Ala Pro Arg Pro Val Val Asn Val Ser  
 110 115 120  
 Gly Gly Pro Leu Leu Tyr Ser His Arg Leu Ser Glu Leu Arg Leu  
 125 130 135  
 Leu Phe Gly Ala Arg Asp Gly Ala Gly Ser Glu His Gln Ile Asn  
 140 145 150  
 His Gln Gly Phe Ser Ala Glu Val Gln Leu Ile His Phe Asn Gln  
 155 160 165  
 Glu Leu Tyr Gly Asn Phe Ser Ala Ala Ser Arg Gly Pro Asn Gly

170	175	180
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185	190	195
Pro Phe Leu Ser Arg Leu Leu Asn Arg Asp Thr Ile Thr Arg Ile		
200	205	210
Ser Tyr Lys Asn Asp Ala Tyr Phe Leu Gln Asp Leu Ser Leu Glu		
215	220	225
Leu Leu Phe Pro Glu Ser Phe Gly Phe Ile Thr Tyr Gln Gly Ser		
230	235	240
Leu Ser Thr Pro Pro Cys Ser Glu Thr Val Thr Trp Ile Leu Ile		
245	250	255
Asp Arg Ala Leu Asn Ile Thr Ser Leu Gln Met His Ser Leu Arg		
260	265	270
Leu Leu Ser Gln Asn Pro Pro Ser Gln Ile Phe Gln Ser Leu Ser		
275	280	285
Gly Asn Ser Arg Pro Leu Gln Pro Leu Ala His Arg Ala Leu Arg		
290	295	300
Gly Asn Arg Asp Pro Arg His Pro Glu Arg Arg Cys Arg Gly Pro		
305	310	315
Asn Tyr Arg Leu His Val Asp Gly Val Pro His Gly Arg		
320	325	

<210> 359

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 359

tctgctgagg tgcagctcat tcac 24

<210> 360

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 360

gaggctctgg aagatctgag atgg 24

<210> 361

<211> 50

<212> DNA

<213> Artificial Sequence



<220>

<223> Synthetic oligonucleotide probe

<400> 361

gcctctttgt caacgttgcc agtacctcta acccattcct cagtcgcctc 50

<210> 362

<211> 3038

<212> DNA

<213> Homo sapiens

<400> 362

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gcagctcct tcccaccca actgcaggtc taattttgga cgctttgcct 200

gccatttctt ccaggttgag ggagccgcag aggcggaggc tcgcgtattc 250

ctgcagtcag caccacgct gcccccggac gctcgggtgt caggcccttc 300

gcgagcgggg ctctccgtct gcggtccctt gtgaaggctc tgggcggctg 350

cagaggccgg ccgtccggtt tggtcacct ctcccaggaa acttcacact 400

ggagagccaa aaggagtgga agagcctgtc ttggagattt tctgggggaa 450

atcctgaggt cattcattat gaagtgtacc gcgcgggagt ggctcagagt 500

aaccacagtg ctgttcattg ctagagcaat tccagccatg gtggttccca 550

atgccacttt attggagaaa cttttggaaa aatacatgga tgaggatggt 600

gagtgggtgga tagccaaaca acgagggaaa agggccatca cagacaatga 650

catgcagagt attttggacc ttcataataa attacgaagt caggtgtatc 700

caacagcctc taatatggag tatatgacat gggatgtaga gctggaaaga 750

tctgcagaat cctgggctga aagttgcttg tgggaacatg gacctgcaag 800

cttgcttcca tcaattggac agaatttggg agcacactgg ggaagatata 850

ggcccccgac gtttcatgta caatcgtggt atgatgaagt gaaagacttt 900

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tggccctgta tgtacacatt atacacaggt cgtgtgggca actagtaaca 1000

gaatcggttg tgccattaat ttgtgtcata acatgaacat ctgggggcag 1050

atatggccca aagctgtcta cctggtgtgc aattactccc caaagggaaa 1100

ctggtggggc catgccctt acaaacatgg gcggccctgt tctgcttgcc 1150

cacctagttt tggagggggc tgtagagaaa atctgtgcta caaagaaggg 1200  
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acagcagtca caagtccatg acacccatgt ccggacaaga tcagatgata 1300  
gtagcagaaa tgaagtcata agcgcacagc aaatgtccca aattgtttct 1350  
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cgaatgtcct gctggctgtt tggatagtaa agctaaagtt attggcagtg 1450  
tacattatga aatgcaatcc agcatctgta gagctgcaat tcattatggg 1500  
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acttgtgaaa caactgtgga acagctctgt ccatttcata agcctgcttc 1700  
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tgtacagagt acatcaacta ttttcagccc aaaaagggtgc caaatgcata 2100  
taaattctga taaacaaagt ctataaaata aaacatggga cattagcttt 2150  
gggaaaagta atgaaaatat aatgggtttta gaaatcctgt gttaaattatt 2200  
gctatatttt cttagcagtt atttctacag ttaattacat agtcatgatt 2250  
gttctacgtt tcatatatta tatgggtgctt tgtatatgcc actaataaaa 2300  
tgaatctaaa cattgaatgt gaatggccct cagaaaatca tctagtgcac 2350  
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agttcaatgc tatgccatta ccaactccaa ataattctca ataattttcc 2450  
acttaataac tgtaaagttt ttttctgtta atttaggcac atagaatatt 2500  
aaattctgat attgcacttc ttattttata taaaataatc ctttaatatc 2550  
caaatgaatc tgtaaaatg tttgattcct tgggaatggc cttaaaaata 2600

aatgtaataa agtcagagtg gtggtatgaa aacattccta gtgatcatgt 2650  
 agtaaatgta gggttaagca tggacagcca gagctttcta tgtactgtta 2700  
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 ccaggaagta taatagcaaa aagttgaaca aagatgaact aatgtattac 2800  
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 taaacattaa aattaatcat gtttcaaaaa aaaaaaaaa 3038

<210> 363  
 <211> 500  
 <212> PRT  
 <213> Homo sapiens

<400> 363

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Phe	Met	Ala	Arg	Ala	Ile	Pro	Ala	Met	Val	Val	Pro	Asn	Ala	Thr
				20				25					30	
Leu	Leu	Glu	Lys	Leu	Leu	Glu	Lys	Tyr	Met	Asp	Glu	Asp	Gly	Glu
				35				40					45	
Trp	Trp	Ile	Ala	Lys	Gln	Arg	Gly	Lys	Arg	Ala	Ile	Thr	Asp	Asn
				50				55					60	
Asp	Met	Gln	Ser	Ile	Leu	Asp	Leu	His	Asn	Lys	Leu	Arg	Ser	Gln
				65				70					75	
Val	Tyr	Pro	Thr	Ala	Ser	Asn	Met	Glu	Tyr	Met	Thr	Trp	Asp	Val
				80				85					90	
Glu	Leu	Glu	Arg	Ser	Ala	Glu	Ser	Trp	Ala	Glu	Ser	Cys	Leu	Trp
				95				100					105	
Glu	His	Gly	Pro	Ala	Ser	Leu	Leu	Pro	Ser	Ile	Gly	Gln	Asn	Leu
				110				115					120	
Gly	Ala	His	Trp	Gly	Arg	Tyr	Arg	Pro	Pro	Thr	Phe	His	Val	Gln
				125				130					135	
Ser	Trp	Tyr	Asp	Glu	Val	Lys	Asp	Phe	Ser	Tyr	Pro	Tyr	Glu	His
				140				145					150	
Glu	Cys	Asn	Pro	Tyr	Cys	Pro	Phe	Arg	Cys	Ser	Gly	Pro	Val	Cys
				155				160					165	
Thr	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Thr	Ser	Asn	Arg	Ile	Gly

170					175					180				
Cys	Ala	Ile	Asn	Leu	Cys	His	Asn	Met	Asn	Ile	Trp	Gly	Gln	Ile
				185					190					195
Trp	Pro	Lys	Ala	Val	Tyr	Leu	Val	Cys	Asn	Tyr	Ser	Pro	Lys	Gly
				200					205					210
Asn	Trp	Trp	Gly	His	Ala	Pro	Tyr	Lys	His	Gly	Arg	Pro	Cys	Ser
				215					220					225
Ala	Cys	Pro	Pro	Ser	Phe	Gly	Gly	Gly	Cys	Arg	Glu	Asn	Leu	Cys
				230					235					240
Tyr	Lys	Glu	Gly	Ser	Asp	Arg	Tyr	Tyr	Pro	Pro	Arg	Glu	Glu	Glu
				245					250					255
Thr	Asn	Glu	Ile	Glu	Arg	Gln	Gln	Ser	Gln	Val	His	Asp	Thr	His
				260					265					270
Val	Arg	Thr	Arg	Ser	Asp	Asp	Ser	Ser	Arg	Asn	Glu	Val	Ile	Ser
				275					280					285
Ala	Gln	Gln	Met	Ser	Gln	Ile	Val	Ser	Cys	Glu	Val	Arg	Leu	Arg
				290					295					300
Asp	Gln	Cys	Lys	Gly	Thr	Thr	Cys	Asn	Arg	Tyr	Glu	Cys	Pro	Ala
				305					310					315
Gly	Cys	Leu	Asp	Ser	Lys	Ala	Lys	Val	Ile	Gly	Ser	Val	His	Tyr
				320					325					330
Glu	Met	Gln	Ser	Ser	Ile	Cys	Arg	Ala	Ala	Ile	His	Tyr	Gly	Ile
				335					340					345
Ile	Asp	Asn	Asp	Gly	Gly	Trp	Val	Asp	Ile	Thr	Arg	Gln	Gly	Arg
				350					355					360
Lys	His	Tyr	Phe	Ile	Lys	Ser	Asn	Arg	Asn	Gly	Ile	Gln	Thr	Ile
				365					370					375
Gly	Lys	Tyr	Gln	Ser	Ala	Asn	Ser	Phe	Thr	Val	Ser	Lys	Val	Thr
				380					385					390
Val	Gln	Ala	Val	Thr	Cys	Glu	Thr	Thr	Val	Glu	Gln	Leu	Cys	Pro
				395					400					405
Phe	His	Lys	Pro	Ala	Ser	His	Cys	Pro	Arg	Val	Tyr	Cys	Pro	Arg
				410					415					420
Asn	Cys	Met	Gln	Ala	Asn	Pro	His	Tyr	Ala	Arg	Val	Ile	Gly	Thr
				425					430					435
Arg	Val	Tyr	Ser	Asp	Leu	Ser	Ser	Ile	Cys	Arg	Ala	Ala	Val	His
				440					445					450
Ala	Gly	Val	Val	Arg	Asn	His	Gly	Gly	Tyr	Val	Asp	Val	Met	Pro
				455					460					465

Val Asp Lys Arg Lys Thr Tyr Ile Ala Ser Phe Gln Asn Gly Ile  
470 475 480

Phe Ser Glu Ser Leu Gln Asn Pro Pro Gly Gly Lys Ala Phe Arg  
485 490 495

Val Phe Ala Val Val  
500

<210> 364

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 364

ggacagaatt tgggagcaca ctgg 24

<210> 365

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 365

ccaagagtat actgtcctcg 20

<210> 366

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 366

agcacagatt ttctctacag ccccc 25

<210> 367

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 367

aaccactcca gcatgtactg ctgc 24

<210> 368

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 368

ccattcaggt gttctggccc tgtatgtaca cattatacac aggtcgtgtg 50

<210> 369

<211> 1685

<212> DNA

<213> Homo sapiens

<400> 369

gcgagacaa gcgcagagcg cagcgcacgg ccacagacag ccctgggcat 50

ccaccgacgg cgcagccgga gccagcagag ccggaaggcg cgccccgggc 100

agagaaagcc gagcagagct ggggtggcgtc tccggggccg cgctccgacg 150

ggccagcgcc ctccccatgt ccctgctccc acgcccgcgc cctccgggtca 200

gcatgaggct cctggcggcc gcgctgctcc tgctgctgct ggcgctgtac 250

accgcgcgtg tggacggggtc caaatgcaag tgctcccgga agggacccaa 300

gatccgctac agcgacgtga agaagctgga aatgaagcca aagtaccgcg 350

actgcgagga gaagatggtt atcatcacca ccaagagcgt gtccagggtac 400

cgaggtcagg agcactgcct gcaccccaag ctgcagagca ccaagcgctt 450

catcaagtgg tacaacgcct ggaacgagaa gcgcagggtc tacgaagaat 500

agggtgaaaa acctcagaag ggaaaactcc aaaccagttg ggagacttgt 550

gcaaaggact ttgcagatta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600

aaaaaaaaaa aaagcctttc tttctcacag gcataagaca caaattatat 650

attgttatga agcacttttt accaacgggtc agtttttaca ttttatagct 700

gcgtgcgaaa ggcttccaga tgggagaccc atctctcttg tgctccagac 750

ttcatcacag gctgcttttt atcaaaaagg ggaaaactca tgcctttcct 800

ttttaaaaaa tgcttttttg tatttgtcca tacgtcacta tacatctgag 850

ctttataagc gcccgaggagg aacaatgagc ttggtggaca catttcattg 900

cagtgttgct ccattcctag cttgggaagc ttccgcttag aggtcctggc 950

gcctcggcac agctgccacg ggctctcctg ggcttatggc cggtcacagc 1000

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 gaacatgcag tactaaagca atatatttgt gattcccat gtaattcttc 1450  
 aatgttaaac agtgcagtcc tctttcgaaa gctaagatga ccatgcgccc 1500  
 tttcctctgt acatataccc ttaagaacgc cccctccaca cactgcccc 1550  
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<210> 370  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 370  
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 35 40 45  
 Ile Arg Tyr Ser Asp Val Lys Lys Leu Glu Met Lys Pro Lys Tyr  
 50 55 60  
 Pro His Cys Glu Glu Lys Met Val Ile Ile Thr Thr Lys Ser Val  
 65 70 75  
 Ser Arg Tyr Arg Gly Gln Glu His Cys Leu His Pro Lys Leu Gln  
 80 85 90  
 Ser Thr Lys Arg Phe Ile Lys Trp Tyr Asn Ala Trp Asn Glu Lys  
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 Arg Arg Val Tyr Glu Glu  
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<210> 371  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 371

cagcgccctc cccatgtccc tg 22

<210> 372

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 372

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<210> 373

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 373

ctccggtcag catgaggctc ctggcggccg ctgctcctgc tgctg 45

<210> 374

<211> 3113

<212> DNA

<213> Homo sapiens

<400> 374

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tactcagttt gctgctgtgt gccccagca cctggatgag agatccttac 350

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gtaatgaccg tggatgaagac gaagatatcc atgatcagaa cagtaagaag 550

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<211> 816

<212> PRT

<213> Homo sapiens

<400> 375

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			20						25					30

Thr	Asn	Tyr	Gly	Lys	Ile	Arg	Gly	Leu	Arg	Thr	Pro	Leu	Pro	Asn
			35					40						45

Glu	Ile	Leu	Gly	Pro	Val	Glu	Gln	Tyr	Leu	Gly	Val	Pro	Tyr	Ala
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50					55					60				
Ser	Pro	Pro	Thr	Gly	Glu	Arg	Arg	Phe	Gln	Pro	Pro	Glu	Pro	Pro
				65					70					75
Ser	Ser	Trp	Thr	Gly	Ile	Arg	Asn	Thr	Thr	Gln	Phe	Ala	Ala	Val
				80					85					90
Cys	Pro	Gln	His	Leu	Asp	Glu	Arg	Ser	Leu	Leu	His	Asp	Met	Leu
				95					100					105
Pro	Ile	Trp	Phe	Thr	Ala	Asn	Leu	Asp	Thr	Leu	Met	Thr	Tyr	Val
				110					115					120
Gln	Asp	Gln	Asn	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Ile	Tyr	Val	Pro
				125					130					135
Thr	Glu	Asp	Gly	Ala	Asn	Thr	Lys	Lys	Asn	Ala	Asp	Asp	Ile	Thr
				140					145					150
Ser	Asn	Asp	Arg	Gly	Glu	Asp	Glu	Asp	Ile	His	Asp	Gln	Asn	Ser
				155					160					165
Lys	Lys	Pro	Val	Met	Val	Tyr	Ile	His	Gly	Gly	Ser	Tyr	Met	Glu
				170					175					180
Gly	Thr	Gly	Asn	Met	Ile	Asp	Gly	Ser	Ile	Leu	Ala	Ser	Tyr	Gly
				185					190					195
Asn	Val	Ile	Val	Ile	Thr	Ile	Asn	Tyr	Arg	Leu	Gly	Ile	Leu	Gly
				200					205					210
Phe	Leu	Ser	Thr	Gly	Asp	Gln	Ala	Ala	Lys	Gly	Asn	Tyr	Gly	Leu
				215					220					225
Leu	Asp	Gln	Ile	Gln	Ala	Leu	Arg	Trp	Ile	Glu	Glu	Asn	Val	Gly
				230					235					240
Ala	Phe	Gly	Gly	Asp	Pro	Lys	Arg	Val	Thr	Ile	Phe	Gly	Ser	Gly
				245					250					255
Ala	Gly	Ala	Ser	Cys	Val	Ser	Leu	Leu	Thr	Leu	Ser	His	Tyr	Ser
				260					265					270
Glu	Gly	Leu	Phe	Gln	Lys	Ala	Ile	Ile	Gln	Ser	Gly	Thr	Ala	Leu
				275					280					285
Ser	Ser	Trp	Ala	Val	Asn	Tyr	Gln	Pro	Ala	Lys	Tyr	Thr	Arg	Ile
				290					295					300
Leu	Ala	Asp	Lys	Val	Gly	Cys	Asn	Met	Leu	Asp	Thr	Thr	Asp	Met
				305					310					315
Val	Glu	Cys	Leu	Arg	Asn	Lys	Asn	Tyr	Lys	Glu	Leu	Ile	Gln	Gln
				320					325					330
Thr	Ile	Thr	Pro	Ala	Thr	Tyr	His	Ile	Ala	Phe	Gly	Pro	Val	Ile
				335					340					345

Asp Gly Asp Val	Ile Pro Asp Asp Pro	Gln Ile Leu Met Glu Gln	350	355	360
Gly Glu Phe Leu	Asn Tyr Asp Ile Met	Leu Gly Val Asn Gln Gly	365	370	375
Glu Gly Leu Lys	Phe Val Asp Gly Ile	Val Asp Asn Glu Asp Gly	380	385	390
Val Thr Pro Asn	Asp Phe Asp Phe Ser	Val Ser Asn Phe Val Asp	395	400	405
Asn Leu Tyr Gly	Tyr Pro Glu Gly Lys	Asp Thr Leu Arg Glu Thr	410	415	420
Ile Lys Phe Met	Tyr Thr Asp Trp Ala	Asp Lys Glu Asn Pro Glu	425	430	435
Thr Arg Arg Lys	Thr Leu Val Ala Leu	Phe Thr Asp His Gln Trp	440	445	450
Val Ala Pro Ala	Val Ala Ala Asp Leu	His Ala Gln Tyr Gly Ser	455	460	465
Pro Thr Tyr Phe	Tyr Ala Phe Tyr His	His Cys Gln Ser Glu Met	470	475	480
Lys Pro Ser Trp	Ala Asp Ser Ala His	Gly Asp Glu Val Pro Tyr	485	490	495
Val Phe Gly Ile	Pro Met Ile Gly Pro	Thr Glu Leu Phe Ser Cys	500	505	510
Asn Phe Ser Lys	Asn Asp Val Met Leu	Ser Ala Val Val Met Thr	515	520	525
Tyr Trp Thr Asn	Phe Ala Lys Thr Gly	Asp Pro Asn Gln Pro Val	530	535	540
Pro Gln Asp Thr	Lys Phe Ile His Thr	Lys Pro Asn Arg Phe Glu	545	550	555
Glu Val Ala Trp	Ser Lys Tyr Asn Pro	Lys Asp Gln Leu Tyr Leu	560	565	570
His Ile Gly Leu	Lys Pro Arg Val Arg	Asp His Tyr Arg Ala Thr	575	580	585
Lys Val Ala Phe	Trp Leu Glu Leu Val	Pro His Leu His Asn Leu	590	595	600
Asn Glu Ile Phe	Gln Tyr Val Ser Thr	Thr Thr Lys Val Pro Pro	605	610	615
Pro Asp Met Thr	Ser Phe Pro Tyr Gly	Thr Arg Arg Ser Pro Ala	620	625	630
Lys Ile Trp Pro	Thr Thr Lys Arg Pro	Ala Ile Thr Pro Ala Asn			

635					640					645				
Asn	Pro	Lys	His	Ser	Lys	Asp	Pro	His	Lys	Thr	Gly	Pro	Glu	Asp
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Thr	Thr	Val	Leu	Ile	Glu	Thr	Lys	Arg	Asp	Tyr	Ser	Thr	Glu	Leu
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Ser	Val	Thr	Ile	Ala	Val	Gly	Ala	Ser	Leu	Leu	Phe	Leu	Asn	Ile
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Leu	Ala	Phe	Ala	Ala	Leu	Tyr	Tyr	Lys	Lys	Asp	Lys	Arg	Arg	His
				695					700					705
Glu	Thr	His	Arg	Arg	Pro	Ser	Pro	Gln	Arg	Asn	Thr	Thr	Asn	Asp
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Ile	Ala	His	Ile	Gln	Asn	Glu	Glu	Ile	Met	Ser	Leu	Gln	Met	Lys
				725					730					735
Gln	Leu	Glu	His	Asp	His	Glu	Cys	Glu	Ser	Leu	Gln	Ala	His	Asp
				740					745					750
Thr	Leu	Arg	Leu	Thr	Cys	Pro	Pro	Asp	Tyr	Thr	Leu	Thr	Leu	Arg
				755					760					765
Arg	Ser	Pro	Asp	Asp	Ile	Pro	Leu	Met	Thr	Pro	Asn	Thr	Ile	Thr
				770					775					780
Met	Ile	Pro	Asn	Thr	Leu	Thr	Gly	Met	Gln	Pro	Leu	His	Thr	Phe
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Asn	Thr	Phe	Ser	Gly	Gly	Gln	Asn	Ser	Thr	Asn	Leu	Pro	His	Gly
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His	Ser	Thr	Thr	Arg	Val									
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<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 376

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<210> 377

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 377

aacccccgag ccaaaagatg gtcac 25

<210> 378

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 378

gtaccgggtga ccaggcagca aaaggcaact atgggctcct ggatcag 47

<210> 379

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 379

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<210> 380

<211> 348

<212> PRT

<213> Homo sapiens

<400> 380

Met	Ala	Ala	Thr	Leu	Gly	Pro	Leu	Gly	Ser	Trp	Gln	Gln	Trp	Arg
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Arg	Cys	Leu	Ser	Ala	Arg	Asp	Gly	Ser	Arg	Met	Leu	Leu	Leu	Leu
				20					25					30
Leu	Leu	Leu	Gly	Ser	Gly	Gln	Gly	Pro	Gln	Gln	Val	Gly	Ala	Gly
				35					40					45
Gln	Thr	Phe	Glu	Tyr	Leu	Lys	Arg	Glu	His	Ser	Leu	Ser	Lys	Pro
				50					55					60
Tyr	Gln	Gly	Val	Gly	Thr	Gly	Ser	Ser	Ser	Leu	Trp	Asn	Leu	Met
				65					70					75
Gly	Asn	Ala	Met	Val	Met	Thr	Gln	Tyr	Ile	Arg	Leu	Thr	Pro	Asp
				80					85					90
Met	Gln	Ser	Lys	Gln	Gly	Ala	Leu	Trp	Asn	Arg	Val	Pro	Cys	Phe
				95					100					105
Leu	Arg	Asp	Trp	Glu	Leu	Gln	Val	His	Phe	Lys	Ile	His	Gly	Gln
				110					115					120
Gly	Lys	Lys	Asn	Leu	His	Gly	Asp	Gly	Leu	Ala	Ile	Trp	Tyr	Thr
				125					130					135
Lys	Asp	Arg	Met	Gln	Pro	Gly	Pro	Val	Phe	Gly	Asn	Met	Asp	Lys
				140					145					150
Phe	Val	Gly	Leu	Gly	Val	Phe	Val	Asp	Thr	Tyr	Pro	Asn	Glu	Glu
				155					160					165
Lys	Gln	Gln	Glu	Arg	Val	Phe	Pro	Tyr	Ile	Ser	Ala	Met	Val	Asn
				170					175					180
Asn	Gly	Ser	Leu	Ser	Tyr	Asp	His	Glu	Arg	Asp	Gly	Arg	Pro	Thr
				185					190					195
Glu	Leu	Gly	Gly	Cys	Thr	Ala	Ile	Val	Arg	Asn	Leu	His	Tyr	Asp
				200					205					210
Thr	Phe	Leu	Val	Ile	Arg	Tyr	Val	Lys	Arg	His	Leu	Thr	Ile	Met
				215					220					225
Met	Asp	Ile	Asp	Gly	Lys	His	Glu	Trp	Arg	Asp	Cys	Ile	Glu	Val
				230					235					240
Pro	Gly	Val	Arg	Leu	Pro	Arg	Gly	Tyr	Tyr	Phe	Gly	Thr	Ser	Ser
				245					250					255



Ile Thr Gly Asp	Leu Ser Asp Asn His Asp Val Ile Ser Leu Lys	
260	265	270
Leu Phe Glu Leu Thr Val Glu Arg Thr Pro Glu Glu Glu Lys Leu		
275	280	285
His Arg Asp Val Phe Leu Pro Ser Val Asp Asn Met Lys Leu Pro		
290	295	300
Glu Met Thr Ala Pro Leu Pro Pro Leu Ser Gly Leu Ala Leu Phe		
305	310	315
Leu Ile Val Phe Phe Ser Leu Val Phe Ser Val Phe Ala Ile Val		
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Ile Gly Ile Ile Leu Tyr Asn Lys Trp Gln Glu Gln Ser Arg Lys		
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Arg Phe Tyr

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<210> 382  
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 <212> DNA  
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<220>  
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<400> 382  
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<210> 383  
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 <212> DNA  
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<220>  
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<400> 383  
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<210> 384  
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 <212> DNA  
 <213> Homo sapiens

<400> 384

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<210> 385  
 <211> 480  
 <212> PRT  
 <213> Homo sapiens

<400> 385

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Pro	Val	Ser	Thr	Pro	Lys	Asn	Gly	Met	Ser	Ser	Lys	Ser	Arg	Lys	35	40	45	
Arg	Ile	Met	Pro	Asp	Pro	Val	Thr	Glu	Pro	Pro	Val	Thr	Asp	Pro	50	55	60	
Val	Tyr	Glu	Ala	Leu	Leu	Tyr	Cys	Asn	Ile	Pro	Ser	Val	Ala	Glu	65	70	75	
Arg	Ser	Met	Glu	Gly	His	Ala	Pro	His	His	Phe	Lys	Leu	Val	Ser	80	85	90	
Val	His	Val	Phe	Ile	Arg	His	Gly	Asp	Arg	Tyr	Pro	Leu	Tyr	Val	95	100	105	
Ile	Pro	Lys	Thr	Lys	Arg	Pro	Glu	Ile	Asp	Cys	Thr	Leu	Val	Ala	110	115	120	
Asn	Arg	Lys	Pro	Tyr	His	Pro	Lys	Leu	Glu	Ala	Phe	Ile	Ser	His	125	130	135	
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Leu	Pro	Leu	Tyr	Pro	Asn	His	Pro	Leu	Cys	Glu	Met	Gly	Glu	Leu	155	160	165	
Thr	Gln	Thr	Gly	Val	Val	Gln	His	Leu	Gln	Asn	Gly	Gln	Leu	Leu	170	175	180	
Arg	Asp	Ile	Tyr	Leu	Lys	Lys	His	Lys	Leu	Leu	Pro	Asn	Asp	Trp	185	190	195	
Ser	Ala	Asp	Gln	Leu	Tyr	Leu	Glu	Thr	Thr	Gly	Lys	Ser	Arg	Thr	200	205	210	

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Cys	Ser	Gly	Ser	Cys	Tyr	Cys	Pro	Val	Arg	Asn	Gln	Tyr	Leu	Glu	245	250	255
Lys	Glu	Gln	Arg	Arg	Gln	Tyr	Leu	Leu	Arg	Leu	Lys	Asn	Ser	Gln	260	265	270
Leu	Glu	Lys	Thr	Tyr	Gly	Glu	Met	Ala	Lys	Ile	Val	Asp	Val	Pro	275	280	285
Thr	Lys	Gln	Leu	Arg	Ala	Ala	Asn	Pro	Ile	Asp	Ser	Met	Leu	Cys	290	295	300
His	Phe	Cys	His	Asn	Val	Ser	Phe	Pro	Cys	Thr	Arg	Asn	Gly	Cys	305	310	315
Val	Asp	Met	Glu	His	Phe	Lys	Val	Ile	Lys	Thr	His	Gln	Ile	Glu	320	325	330
Asp	Glu	Arg	Glu	Arg	Arg	Glu	Lys	Lys	Leu	Tyr	Phe	Gly	Tyr	Ser	335	340	345
Leu	Leu	Gly	Ala	His	Pro	Ile	Leu	Asn	Gln	Thr	Ile	Gly	Arg	Met	350	355	360
Gln	Arg	Ala	Thr	Glu	Gly	Arg	Lys	Glu	Glu	Leu	Phe	Ala	Leu	Tyr	365	370	375
Ser	Ala	His	Asp	Val	Thr	Leu	Ser	Pro	Val	Leu	Ser	Ala	Leu	Gly	380	385	390
Leu	Ser	Glu	Ala	Arg	Phe	Pro	Arg	Phe	Ala	Ala	Arg	Leu	Ile	Phe	395	400	405
Glu	Leu	Trp	Gln	Asp	Arg	Glu	Lys	Pro	Ser	Glu	His	Ser	Val	Arg	410	415	420
Ile	Leu	Tyr	Asn	Gly	Val	Asp	Val	Thr	Phe	His	Thr	Ser	Phe	Cys	425	430	435
Gln	Asp	His	His	Lys	Arg	Ser	Pro	Lys	Pro	Met	Cys	Pro	Leu	Glu	440	445	450
Asn	Leu	Val	Arg	Phe	Val	Lys	Arg	Asp	Met	Phe	Val	Ala	Leu	Gly	455	460	465
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<210> 386

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 387  
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<400> 387  
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<212> DNA  
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<210> 389  
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atcctttctg ggagttcaag attgtgcagt aattggttag gactctgagc 150  
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<210> 390  
<211> 916  
<212> PRT  
<213> Homo sapiens  
<400> 390





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				320					325					330			
Ala	Lys	Val	Leu	Ile	Thr	Val	Leu	Asp	Val	Asn	Asp	Asn	Ala	Pro			
				335					340					345			
Glu	Val	Val	Leu	Thr	Ser	Leu	Ala	Ser	Ser	Val	Pro	Glu	Asn	Ser			
				350					355					360			
Pro	Arg	Gly	Thr	Leu	Ile	Ala	Leu	Leu	Asn	Val	Asn	Asp	Gln	Asp			
				365					370					375			
Ser	Glu	Glu	Asn	Gly	Gln	Val	Ile	Cys	Phe	Ile	Gln	Gly	Asn	Leu			
				380					385					390			
Pro	Phe	Lys	Leu	Glu	Lys	Ser	Tyr	Gly	Asn	Tyr	Tyr	Ser	Leu	Val			
				395					400					405			
Thr	Asp	Ile	Val	Leu	Asp	Arg	Glu	Gln	Val	Pro	Ser	Tyr	Asn	Ile			
				410					415					420			
Thr	Val	Thr	Ala	Thr	Asp	Arg	Gly	Thr	Pro	Pro	Leu	Ser	Thr	Glu			
				425					430					435			
Thr	His	Ile	Ser	Leu	Asn	Val	Ala	Asp	Thr	Asn	Asp	Asn	Pro	Pro			
				440					445					450			
Val	Phe	Pro	Gln	Ala	Ser	Tyr	Ser	Ala	Tyr	Ile	Pro	Glu	Asn	Asn			
				455					460					465			
Pro	Arg	Gly	Val	Ser	Leu	Val	Ser	Val	Thr	Ala	His	Asp	Pro	Asp			
				470					475					480			
Cys	Glu	Glu	Asn	Ala	Gln	Ile	Thr	Tyr	Ser	Leu	Ala	Glu	Asn	Thr			
				485					490					495			
Ile	Gln	Gly	Ala	Ser	Leu	Ser	Ser	Tyr	Val	Ser	Ile	Asn	Ser	Asp			
				500					505					510			
Thr	Gly	Val	Leu	Tyr	Ala	Leu	Ser	Ser	Phe	Asp	Tyr	Glu	Gln	Phe			
				515					520					525			
Arg	Asp	Leu	Gln	Val	Lys	Val	Met	Ala	Arg	Asp	Asn	Gly	His	Pro			
				530					535					540			
Pro	Leu	Ser	Ser	Asn	Val	Ser	Leu	Ser	Leu	Phe	Val	Leu	Asp	Gln			
				545					550					555			
Asn	Asp	Asn	Ala	Pro	Glu	Ile	Leu	Tyr	Pro	Ala	Leu	Pro	Thr	Asp			
				560					565					570			
Gly	Ser	Thr	Gly	Val	Glu	Leu	Ala	Pro	Arg	Ser	Ala	Glu	Pro	Gly			
				575					580					585			

Tyr	Leu	Val	Thr	Lys	Val	Val	Ala	Val	Asp	Arg	Asp	Ser	Gly	Gln	590	595	600
Asn	Ala	Trp	Leu	Ser	Tyr	Arg	Leu	Leu	Lys	Ala	Ser	Glu	Pro	Gly	605	610	615
Leu	Phe	Ser	Val	Gly	Leu	His	Thr	Gly	Glu	Val	Arg	Thr	Ala	Arg	620	625	630
Ala	Leu	Leu	Asp	Arg	Asp	Ala	Leu	Lys	Gln	Ser	Leu	Val	Val	Ala	635	640	645
Val	Gln	Asp	His	Gly	Gln	Pro	Pro	Leu	Ser	Ala	Thr	Val	Thr	Leu	650	655	660
Thr	Val	Ala	Val	Ala	Asp	Ser	Ile	Pro	Gln	Val	Leu	Ala	Asp	Leu	665	670	675
Gly	Ser	Leu	Glu	Ser	Pro	Ala	Asn	Ser	Glu	Thr	Ser	Asp	Leu	Thr	680	685	690
Leu	Tyr	Leu	Val	Val	Ala	Val	Ala	Ala	Val	Ser	Cys	Val	Phe	Leu	695	700	705
Ala	Phe	Val	Ile	Leu	Leu	Leu	Ala	Leu	Arg	Leu	Arg	Arg	Trp	His	710	715	720
Lys	Ser	Arg	Leu	Leu	Gln	Ala	Ser	Gly	Gly	Gly	Leu	Thr	Gly	Ala	725	730	735
Pro	Ala	Ser	His	Phe	Val	Gly	Val	Asp	Gly	Val	Gln	Ala	Phe	Leu	740	745	750
Gln	Thr	Tyr	Ser	His	Glu	Val	Ser	Leu	Thr	Thr	Asp	Ser	Arg	Lys	755	760	765
Ser	His	Leu	Ile	Phe	Pro	Gln	Pro	Asn	Tyr	Ala	Asp	Met	Leu	Val	770	775	780
Ser	Gln	Glu	Ser	Phe	Glu	Lys	Ser	Glu	Pro	Leu	Leu	Leu	Ser	Gly	785	790	795
Asp	Ser	Val	Phe	Ser	Lys	Asp	Ser	His	Gly	Leu	Ile	Glu	Val	Ser	800	805	810
Leu	Tyr	Gln	Ile	Phe	Phe	Leu	Phe	Phe	Phe	Asn	Cys	Ser	Val	Ser	815	820	825
Gln	Ala	Gly	Val	Gln	Arg	Tyr	Asp	His	Ser	Ser	Leu	Arg	Pro	Gln	830	835	840
Thr	Pro	Arg	Leu	Lys	Gln	Leu	Ser	His	Leu	Cys	Leu	Arg	Cys	Asn	845	850	855
Arg	Asp	Tyr	Arg	Cys	Lys	Pro	Pro	Thr	Val	Cys	Leu	Ser	Ile	Tyr	860	865	870
Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Leu	Leu			

	875		880		885
Ser Cys Thr Asp Gly Ser Leu Thr Pro Val Ile Pro Val Leu Trp					
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Glu Ala Glu Ala Gly Gly Ser Pro Glu Val Gly Ser Leu Arg Pro					
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Ala

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 <212> DNA  
 <213> Artificial Sequence

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 <223> Synthetic oligonucleotide probe

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<210> 392  
 <211> 24  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 392  
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<210> 393  
 <211> 40  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 393  
 ccgactgtga aagagaacgc cccagatcca cttgttcccc 40

<210> 394  
 <211> 999  
 <212> DNA  
 <213> Homo sapiens

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<211> 260

<212> PRT

<213> Homo sapiens

<400> 395

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Asp	Lys	Val	Leu	Gly	Gly	His	Glu	Cys	Gln	Pro	His	Ser	Gln	Pro
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Trp	Gln	Ala	Ala	Leu	Phe	Gln	Gly	Gln	Gln	Leu	Leu	Cys	Gly	Gly
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Val	Leu	Val	Gly	Gly	Asn	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Lys
			65						70					75
Lys	Pro	Lys	Tyr	Thr	Val	Arg	Leu	Gly	Asp	His	Ser	Leu	Gln	Asn
			80						85					90
Lys	Asp	Gly	Pro	Glu	Gln	Glu	Ile	Pro	Val	Val	Gln	Ser	Ile	Pro
			95						100					105

His	Pro	Cys	Tyr	Asn	Ser	Ser	Asp	Val	Glu	Asp	His	Asn	His	Asp	110	115	120
Leu	Met	Leu	Leu	Gln	Leu	Arg	Asp	Gln	Ala	Ser	Leu	Gly	Ser	Lys	125	130	135
Val	Lys	Pro	Ile	Ser	Leu	Ala	Asp	His	Cys	Thr	Gln	Pro	Gly	Gln	140	145	150
Lys	Cys	Thr	Val	Ser	Gly	Trp	Gly	Thr	Val	Thr	Ser	Pro	Arg	Glu	155	160	165
Asn	Phe	Pro	Asp	Thr	Leu	Asn	Cys	Ala	Glu	Val	Lys	Ile	Phe	Pro	170	175	180
Gln	Lys	Lys	Cys	Glu	Asp	Ala	Tyr	Pro	Gly	Gln	Ile	Thr	Asp	Gly	185	190	195
Met	Val	Cys	Ala	Gly	Ser	Ser	Lys	Gly	Ala	Asp	Thr	Cys	Gln	Gly	200	205	210
Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Asp	Gly	Ala	Leu	Gln	Gly	Ile	215	220	225
Thr	Ser	Trp	Gly	Ser	Asp	Pro	Cys	Gly	Arg	Ser	Asp	Lys	Pro	Gly	230	235	240
Val	Tyr	Thr	Asn	Ile	Cys	Arg	Tyr	Leu	Asp	Trp	Ile	Lys	Lys	Ile	245	250	255
Ile	Gly	Ser	Lys	Gly											260		

<210> 396

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 396

cagcctacag aataaagatg gccc 24

<210> 397

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 397

ggtgcaatga tctgccaggc tgat 24

<210> 398

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 398

agaaataacct gtggttcagt ccattccaaa cccctgctac aacagcag 48

<210> 399

<211> 2236

<212> DNA

<213> Homo sapiens

<400> 399

ggcgccggtg caccggggcgg gctgagcgcc tcttgccggc cggcctgcgc 50

gccccggccc gccgcgccgc ccacgcccc accccggccc gcgcccccta 100

gccccgccc gggcccgccgc ccgcgccccgc gccaggtga gcgctccgcc 150

cgccgcgagg ccccgccccg gcccgcccc gcccgcccc ggccggcggg 200

ggaaccgggc ggattcctcg cgcgtcaaac cacctgatcc cataaaacat 250

tcattcctccc ggccggccgc gctgcgagcg ccccgccagt ccgcgcgcgc 300

gccgcacctg cctgtgccc cctgcgcgcc ctgcgcaccc gcggcccgag 350

cccagccaga gccgggcgga gcggagcgcg ccgagcctcg tcccgcggcc 400

gggcccgggc cgggcccgtag cggcgccgc tggatgcgga cccggccgcg 450

gggagacggg cggccgcccc gaaacgactt tcagtccccg acgcgccccg 500

cccaaccctt acgatgaaga gggcgtccgc tggaggagc cggctgctgg 550

catgggtgct gtggctgcag gcctggcagg tggcagcccc atgccagggt 600

gcctgcgtat gctacaatga gcccagggtg acgacaagct gccccagca 650

gggcctgcag gctgtgccc tgggcatccc tgctgccagc cagcgcattt 700

tcttgacagg caaccgcatt tcgcatgtgc cagctgccag cttccgtgcc 750

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gcgataatgc acagctccgg tctgtggacc ctgccacatt ccacggcctg 900

ggccgcctac acacgtgca cctggaccgc tgcggcctgc aggagctggg 950

cccggggctg ttccggggc tggctgccct gcagtacct tacctgcagg 1000

acaacgcgct gcaggcactg cctgatgaca ccttccgcga cctgggcaac 1050

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cgcttccgt gggctgcaca gcctcgaccg tctcctactg caccagaacc 1150  
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 acactctatc tgtttgccaa caatctatca gcgctgcccc ctgaggecct 1250  
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 ggctcctcct ccgaggtgcc ctgcagcctc ccgcaacgcc tggttgccg 1400  
 tgacctcaaa cgcctagctg ccaatgacct gcagggctgc gctgtggcca 1450  
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 ctggggcttc ccaagtgtg ccagccagat gccgctgaca aggcctcagt 1550  
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 cgtctgggccc aggcaggcag cgggggtggc gggactggtg actcagaagg 1850  
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 cgctggtgct gtggacagtg cttgggccct gctgaccccc agcggacaca 1950  
 agagcgtgct cagcagccag gtgtgtgtac atacggggtc tctctccacg 2000  
 ccgccaagcc agccgggcgg ccgaccgctg gggcaggcca ggccaggtcc 2050  
 tccctgatgg acgctgccc cccgccaccc ccattctccac cccatcatgt 2100  
 ttacaggggt cgggggcagc gtttgttcca gaacgccgcc tcccaccag 2150  
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 gacgacgtgg aataaagagc tcttttctta aaaaaa 2236

<210> 400

<211> 473

<212> PRT

<213> Homo sapiens

<400> 400

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1				5				10					15	
Leu	Trp	Leu	Gln	Ala	Trp	Gln	Val	Ala	Ala	Pro	Cys	Pro	Gly	Ala
			20					25					30	



Cys	Val	Cys	Tyr	Asn	Glu	Pro	Lys	Val	Thr	Thr	Ser	Cys	Pro	Gln	35	40	45
Gln	Gly	Leu	Gln	Ala	Val	Pro	Val	Gly	Ile	Pro	Ala	Ala	Ser	Gln	50	55	60
Arg	Ile	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	His	Val	Pro	Ala	Ala	65	70	75
Ser	Phe	Arg	Ala	Cys	Arg	Asn	Leu	Thr	Ile	Leu	Trp	Leu	His	Ser	80	85	90
Asn	Val	Leu	Ala	Arg	Ile	Asp	Ala	Ala	Ala	Phe	Thr	Gly	Leu	Ala	95	100	105
Leu	Leu	Glu	Gln	Leu	Asp	Leu	Ser	Asp	Asn	Ala	Gln	Leu	Arg	Ser	110	115	120
Val	Asp	Pro	Ala	Thr	Phe	His	Gly	Leu	Gly	Arg	Leu	His	Thr	Leu	125	130	135
His	Leu	Asp	Arg	Cys	Gly	Leu	Gln	Glu	Leu	Gly	Pro	Gly	Leu	Phe	140	145	150
Arg	Gly	Leu	Ala	Ala	Leu	Gln	Tyr	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	155	160	165
Leu	Gln	Ala	Leu	Pro	Asp	Asp	Thr	Phe	Arg	Asp	Leu	Gly	Asn	Leu	170	175	180
Thr	His	Leu	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	Ser	Val	Pro	Glu	185	190	195
Arg	Ala	Phe	Arg	Gly	Leu	His	Ser	Leu	Asp	Arg	Leu	Leu	Leu	His	200	205	210
Gln	Asn	Arg	Val	Ala	His	Val	His	Pro	His	Ala	Phe	Arg	Asp	Leu	215	220	225
Gly	Arg	Leu	Met	Thr	Leu	Tyr	Leu	Phe	Ala	Asn	Asn	Leu	Ser	Ala	230	235	240
Leu	Pro	Thr	Glu	Ala	Leu	Ala	Pro	Leu	Arg	Ala	Leu	Gln	Tyr	Leu	245	250	255
Arg	Leu	Asn	Asp	Asn	Pro	Trp	Val	Cys	Asp	Cys	Arg	Ala	Arg	Pro	260	265	270
Leu	Trp	Ala	Trp	Leu	Gln	Lys	Phe	Arg	Gly	Ser	Ser	Ser	Glu	Val	275	280	285
Pro	Cys	Ser	Leu	Pro	Gln	Arg	Leu	Ala	Gly	Arg	Asp	Leu	Lys	Arg	290	295	300
Leu	Ala	Ala	Asn	Asp	Leu	Gln	Gly	Cys	Ala	Val	Ala	Thr	Gly	Pro	305	310	315
Tyr	His	Pro	Ile	Trp	Thr	Gly	Arg	Ala	Thr	Asp	Glu	Glu	Pro	Leu			

320	325	330
Gly Leu Pro Lys Cys Cys Gln Pro Asp	Ala Ala Asp Lys Ala Ser	
335	340	345
Val Leu Glu Pro Gly Arg Pro Ala Ser	Ala Gly Asn Ala Leu Lys	
350	355	360
Gly Arg Val Pro Pro Gly Asp Ser Pro	Pro Gly Asn Gly Ser Gly	
365	370	375
Pro Arg His Ile Asn Asp Ser Pro Phe	Gly Thr Leu Pro Gly Ser	
380	385	390
Ala Glu Pro Pro Leu Thr Ala Val Arg	Pro Glu Gly Ser Glu Pro	
395	400	405
Pro Gly Phe Pro Thr Ser Gly Pro Arg	Arg Arg Pro Gly Cys Ser	
410	415	420
Arg Lys Asn Arg Thr Arg Ser His Cys	Arg Leu Gly Gln Ala Gly	
425	430	435
Ser Gly Gly Gly Gly Thr Gly Asp Ser	Glu Gly Ser Gly Ala Leu	
440	445	450
Pro Ser Leu Thr Cys Ser Leu Thr Pro	Leu Gly Leu Ala Leu Val	
455	460	465
Leu Trp Thr Val Leu Gly Pro Cys		
470		

<210> 401

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 401

tggtgcccct gcagtacctc tacc 24

<210> 402

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 402

ccctgcaggt cattggcagc tagg 24

<210> 403

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 403

aggcactgcc tgatgacacc ttccgcgacc tgggcaacct cacac 45

<210> 404

<211> 2738

<212> DNA

<213> Homo sapiens

<400> 404

ggaagtccac ggggagcttg gatgccaaag ggaggacggc tgggtcctct 50

ggagaggact actcactggc atattttctga ggtatctgta gaataaccac 100

agcctcagat actggggact ttacagtccc acagaaccgt cctcccagga 150

agctgaatcc agcaagaaca atggaggcca gcgggaagct catttgaga 200

caaaggcaag tccttttttc ctttctcctt ttgggcttat ctctggcggg 250

cgcggcggaa cctagaagct attctgtggt ggaggaaact gagggcagct 300

cctttgtcac caatttagca aaggacctgg gtctggagca gagggaattc 350

tccaggcggg gggttagggt tgtttccaga gggaacaaac tacatttgca 400

gctcaatcag gagaccgcgg atttggtgct aaatgagaaa ttggaccgtg 450

aggatctgtg cggtcacaca gagccctgtg tgctacgttt ccaagtgttg 500

ctagagagtc ccttcgagtt ttttcaagct gagctgcaag taatagacat 550

aaacgaccac tctccagtat ttctggacaa acaaagtgtg gtgaaagtat 600

cagagagcag tcctcctggg actacgtttc ctctgaagaa tgccgaagac 650

ttagatgtag gccaaaacaa tattgagaac tatataatca gcccactc 700

ctattttcgg gtcttcaccc gcaaacgcag tgatggcagg aaataccag 750

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agcagccttt ctatagagtg cagatctctg aggacagtcc ggtaggcttc 950

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gatttcctat tcacttttcc aagcttcaga agagattggc aaaaccttta 1050

agatcaatcc cttgacagga gaaattgaac taaaaaaaca actcgatttc 1100

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cttttctgga aaatgcaccg ttctgattca agtgatagat gtgaacgacc 1200  
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 agagaaagca gagcggaata caacatcact atcactgtca ctgacttggg 1450  
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 cagagactca ggcaccaacg cccaggtcac ctactcgtg ctgccgcccc 1650  
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 gtgctgtacc cgctgcagaa cggctccgcg ccctgcaccg agctggtgcc 1900  
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 ccctatccca gagctaccag tatgaggtgt gtctggcagg aggctcagg 2450  
 accaatgagt tcaagttcct gaagccgatt atccccaact tccctccca 2500  
 gtgcctggg aaagaaatac aaggaaattc taccttcccc aataactttg 2550  
 ggttcaatat tcagtacca tagttgactt ttacattcca taggtatttt 2600

atattgtggc atttccatgc caatgtttat ttcccccaat ttgtgtgtat 2650  
 gtaatatgt acggatttac tcttgatttt tctcatgttc tttctccctt 2700  
 tgttttaaag tgaacattta cctttattcc tggttctt 2738

<210> 405  
 <211> 798  
 <212> PRT  
 <213> Homo sapiens

<400> 405

Met	Glu	Ala	Ser	Gly	Lys	Leu	Ile	Cys	Arg	Gln	Arg	Gln	Val	Leu	1	5	10	15
Phe	Ser	Phe	Leu	Leu	Leu	Gly	Leu	Ser	Leu	Ala	Gly	Ala	Ala	Glu	20	25	30	
Pro	Arg	Ser	Tyr	Ser	Val	Val	Glu	Glu	Thr	Glu	Gly	Ser	Ser	Phe	35	40	45	
Val	Thr	Asn	Leu	Ala	Lys	Asp	Leu	Gly	Leu	Glu	Gln	Arg	Glu	Phe	50	55	60	
Ser	Arg	Arg	Gly	Val	Arg	Val	Val	Ser	Arg	Gly	Asn	Lys	Leu	His	65	70	75	
Leu	Gln	Leu	Asn	Gln	Glu	Thr	Ala	Asp	Leu	Leu	Leu	Asn	Glu	Lys	80	85	90	
Leu	Asp	Arg	Glu	Asp	Leu	Cys	Gly	His	Thr	Glu	Pro	Cys	Val	Leu	95	100	105	
Arg	Phe	Gln	Val	Leu	Leu	Glu	Ser	Pro	Phe	Glu	Phe	Phe	Gln	Ala	110	115	120	
Glu	Leu	Gln	Val	Ile	Asp	Ile	Asn	Asp	His	Ser	Pro	Val	Phe	Leu	125	130	135	
Asp	Lys	Gln	Met	Leu	Val	Lys	Val	Ser	Glu	Ser	Ser	Pro	Pro	Gly	140	145	150	
Thr	Thr	Phe	Pro	Leu	Lys	Asn	Ala	Glu	Asp	Leu	Asp	Val	Gly	Gln	155	160	165	
Asn	Asn	Ile	Glu	Asn	Tyr	Ile	Ile	Ser	Pro	Asn	Ser	Tyr	Phe	Arg	170	175	180	
Val	Leu	Thr	Arg	Lys	Arg	Ser	Asp	Gly	Arg	Lys	Tyr	Pro	Glu	Leu	185	190	195	
Val	Leu	Asp	Lys	Ala	Leu	Asp	Arg	Glu	Glu	Glu	Ala	Glu	Leu	Arg	200	205	210	
Leu	Thr	Leu	Thr	Ala	Leu	Asp	Gly	Gly	Ser	Pro	Pro	Arg	Ser	Gly	215	220	225	
Thr	Ala	Gln	Val	Tyr	Ile	Glu	Val	Leu	Asp	Val	Asn	Asp	Asn	Ala				

230	235	240
Pro Glu Phe Glu Gln Pro Phe Tyr Arg	Val Gln Ile Ser Glu Asp	
245	250	255
Ser Pro Val Gly Phe Leu Val Val Lys	Val Ser Ala Thr Asp Val	
260	265	270
Asp Thr Gly Val Asn Gly Glu Ile Ser	Tyr Ser Leu Phe Gln Ala	
275	280	285
Ser Glu Glu Ile Gly Lys Thr Phe Lys	Ile Asn Pro Leu Thr Gly	
290	295	300
Glu Ile Glu Leu Lys Lys Gln Leu Asp	Phe Glu Lys Leu Gln Ser	
305	310	315
Tyr Glu Val Asn Ile Glu Ala Arg Asp	Ala Gly Thr Phe Ser Gly	
320	325	330
Lys Cys Thr Val Leu Ile Gln Val Ile	Asp Val Asn Asp His Ala	
335	340	345
Pro Glu Val Thr Met Ser Ala Phe Thr	Ser Pro Ile Pro Glu Asn	
350	355	360
Ala Pro Glu Thr Val Val Ala Leu Phe	Ser Val Ser Asp Leu Asp	
365	370	375
Ser Gly Glu Asn Gly Lys Ile Ser Cys	Ser Ile Gln Glu Asp Leu	
380	385	390
Pro Phe Leu Leu Lys Ser Ala Glu Asn	Phe Tyr Thr Leu Leu Thr	
395	400	405
Glu Arg Pro Leu Asp Arg Glu Ser Arg	Ala Glu Tyr Asn Ile Thr	
410	415	420
Ile Thr Val Thr Asp Leu Gly Thr Pro	Met Leu Ile Thr Gln Leu	
425	430	435
Asn Met Thr Val Leu Ile Ala Asp Val	Asn Asp Asn Ala Pro Ala	
440	445	450
Phe Thr Gln Thr Ser Tyr Thr Leu Phe	Val Arg Glu Asn Asn Ser	
455	460	465
Pro Ala Leu His Ile Arg Ser Val Ser	Ala Thr Asp Arg Asp Ser	
470	475	480
Gly Thr Asn Ala Gln Val Thr Tyr Ser	Leu Leu Pro Pro Gln Asp	
485	490	495
Pro His Leu Pro Leu Thr Ser Leu Val	Ser Ile Asn Ala Asp Asn	
500	505	510
Gly His Leu Phe Ala Leu Arg Ser Leu	Asp Tyr Glu Ala Leu Gln	
515	520	525

Gly	Phe	Gln	Phe	Arg	Val	Gly	Ala	Ser	Asp	His	Gly	Ser	Pro	Ala	530	535	540
Leu	Ser	Ser	Glu	Ala	Leu	Val	Arg	Val	Val	Val	Leu	Asp	Ala	Asn	545	550	555
Asp	Asn	Ser	Pro	Phe	Val	Leu	Tyr	Pro	Leu	Gln	Asn	Gly	Ser	Ala	560	565	570
Pro	Cys	Thr	Glu	Leu	Val	Pro	Arg	Ala	Ala	Glu	Pro	Gly	Tyr	Leu	575	580	585
Val	Thr	Lys	Val	Val	Ala	Val	Asp	Gly	Asp	Ser	Gly	Gln	Asn	Ala	590	595	600
Trp	Leu	Ser	Tyr	Gln	Leu	Leu	Lys	Ala	Thr	Glu	Leu	Gly	Leu	Phe	605	610	615
Gly	Val	Trp	Ala	His	Asn	Gly	Glu	Val	Arg	Thr	Ala	Arg	Leu	Leu	620	625	630
Ser	Glu	Arg	Asp	Ala	Ala	Lys	His	Arg	Leu	Val	Val	Leu	Val	Lys	635	640	645
Asp	Asn	Gly	Glu	Pro	Pro	Arg	Ser	Ala	Thr	Ala	Thr	Leu	His	Val	650	655	660
Leu	Leu	Val	Asp	Gly	Phe	Ser	Gln	Pro	Tyr	Leu	Pro	Leu	Pro	Glu	665	670	675
Ala	Ala	Pro	Thr	Gln	Ala	Gln	Ala	Asp	Leu	Leu	Thr	Val	Tyr	Leu	680	685	690
Val	Val	Ala	Leu	Ala	Ser	Val	Ser	Ser	Leu	Phe	Leu	Phe	Ser	Val	695	700	705
Leu	Leu	Phe	Val	Ala	Val	Arg	Leu	Cys	Arg	Arg	Ser	Arg	Ala	Ala	710	715	720
Ser	Val	Gly	Arg	Cys	Leu	Val	Pro	Glu	Gly	Pro	Leu	Pro	Gly	His	725	730	735
Leu	Val	Asp	Met	Ser	Gly	Thr	Arg	Thr	Leu	Ser	Gln	Ser	Tyr	Gln	740	745	750
Tyr	Glu	Val	Cys	Leu	Ala	Gly	Gly	Ser	Gly	Thr	Asn	Glu	Phe	Lys	755	760	765
Phe	Leu	Lys	Pro	Ile	Ile	Pro	Asn	Phe	Pro	Pro	Gln	Cys	Pro	Gly	770	775	780
Lys	Glu	Ile	Gln	Gly	Asn	Ser	Thr	Phe	Pro	Asn	Asn	Phe	Gly	Phe	785	790	795

Asn Ile Gln

<210> 406

<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 406  
ctgagaacgc gcctgaaact gtg 23

<210> 407  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 407  
agcgttgtca ttgacatcgg cg 22

<210> 408  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 408  
ttagttgctc cattcaggag gatctaccct tcctcctgaa atccgcggaa 50

<210> 409  
<211> 1379  
<212> DNA  
<213> Homo sapiens

<400> 409  
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gcgtagccgt gcgcgattg cctctcggcc tgggcaatgg tcccggctgc 100  
cggtcgacga ccgcccgcg tcatgcggct cctcggctgg tggcaagtat 150  
tgctgtgggt gctgggactt cccgtccgcg gcgtggaggt tgcagaggaa 200  
agtggtcgct tatggtcaga ggagcagcct gctcacctc tccaggtggg 250  
ggctgtgtac ctgggtgagg aggagctcct gcatgaccgc atgggccagg 300  
acagggcagc agaagaggcc aatgcggtgc tggggctgga caccgaaggc 350  
gatcacatgg tgatgctgtc tgtgattcct ggggaagctg aggacaaagt 400  
gagttcagag cctagcggcg tcacctgtgg tgctggagga gcggaggact 450  
caaggtgcaa cgtccgagag agccttttct ctctggatgg cgctggagca 500



cacttccctg acagagaaga ggagtattac acagagccag aagtggcgga 550  
 atctgacgca gccccgacag aggactccaa taacactgaa agtctgaaat 600  
 ccccaaaggt gaactgtgag gagagaaaca ttacaggatt agaaaatttc 650  
 actctgaaaa ttttaaataat gtcacaggac cttatggatt ttctgaaccc 700  
 aaacggtagt gactgtactc tagtcctggt ttacaccccg tggtgccgct 750  
 tttctgccag tttggcccct cactttaact ctctgccccg ggcattttcca 800  
 gctcttcact ttttggcact ggatgcatct cagcacagca gcctttctac 850  
 caggtttggc accgtagctg ttcctaataat tttattattt caaggagcta 900  
 aaccaatggc cagatttaat catacagatc gaacactgga aacactgaaa 950  
 atcttcattt ttaatcagac aggtatagaa gccaagaaga atgtggtggt 1000  
 aactcaagcc gaccaaataag gccctcttcc cagcactttg ataaaaagt 1050  
 tggactgggt gcttgtattt tccttattct ttttaattag ttttattatg 1100  
 tatgctacca ttcgaactga gagtattcgg tggctaattc caggacaaga 1150  
 gcaggaacat gtggagtagt gatggtctga aagaagttgg aaagaggaac 1200  
 ttcaatcctt cgtttcagaa attagtgcga cagtttcata cattttctcc 1250  
 agtgacgtgt tgacttgaaa cttcaggcag attaaaagaa tcatttggtg 1300  
 aacaactgaa tgtataaaaa aattataaac tgggtgttta actagtattg 1350  
 caataagcaa atgcaaaaaat attcaatag 1379

<210> 410  
 <211> 360  
 <212> PRT  
 <213> Homo sapiens

<400> 410  
 Met Val Pro Ala Ala Gly Arg Arg Pro Pro Arg Val Met Arg Leu  
 1 5 10 15  
 Leu Gly Trp Trp Gln Val Leu Leu Trp Val Leu Gly Leu Pro Val  
 20 25 30  
 Arg Gly Val Glu Val Ala Glu Glu Ser Gly Arg Leu Trp Ser Glu  
 35 40 45  
 Glu Gln Pro Ala His Pro Leu Gln Val Gly Ala Val Tyr Leu Gly  
 50 55 60  
 Glu Glu Glu Leu Leu His Asp Pro Met Gly Gln Asp Arg Ala Ala  
 65 70 75  
 Glu Glu Ala Asn Ala Val Leu Gly Leu Asp Thr Gln Gly Asp His

80										85					90				
Met	Val	Met	Leu	Ser	Val	Ile	Pro	Gly	Glu	Ala	Glu	Asp	Lys	Val					
				95					100					105					
Ser	Ser	Glu	Pro	Ser	Gly	Val	Thr	Cys	Gly	Ala	Gly	Gly	Ala	Glu					
				110					115					120					
Asp	Ser	Arg	Cys	Asn	Val	Arg	Glu	Ser	Leu	Phe	Ser	Leu	Asp	Gly					
				125					130					135					
Ala	Gly	Ala	His	Phe	Pro	Asp	Arg	Glu	Glu	Glu	Tyr	Tyr	Thr	Glu					
				140					145					150					
Pro	Glu	Val	Ala	Glu	Ser	Asp	Ala	Ala	Pro	Thr	Glu	Asp	Ser	Asn					
				155					160					165					
Asn	Thr	Glu	Ser	Leu	Lys	Ser	Pro	Lys	Val	Asn	Cys	Glu	Glu	Arg					
				170					175					180					
Asn	Ile	Thr	Gly	Leu	Glu	Asn	Phe	Thr	Leu	Lys	Ile	Leu	Asn	Met					
				185					190					195					
Ser	Gln	Asp	Leu	Met	Asp	Phe	Leu	Asn	Pro	Asn	Gly	Ser	Asp	Cys					
				200					205					210					
Thr	Leu	Val	Leu	Phe	Tyr	Thr	Pro	Trp	Cys	Arg	Phe	Ser	Ala	Ser					
				215					220					225					
Leu	Ala	Pro	His	Phe	Asn	Ser	Leu	Pro	Arg	Ala	Phe	Pro	Ala	Leu					
				230					235					240					
His	Phe	Leu	Ala	Leu	Asp	Ala	Ser	Gln	His	Ser	Ser	Leu	Ser	Thr					
				245					250					255					
Arg	Phe	Gly	Thr	Val	Ala	Val	Pro	Asn	Ile	Leu	Leu	Phe	Gln	Gly					
				260					265					270					
Ala	Lys	Pro	Met	Ala	Arg	Phe	Asn	His	Thr	Asp	Arg	Thr	Leu	Glu					
				275					280					285					
Thr	Leu	Lys	Ile	Phe	Ile	Phe	Asn	Gln	Thr	Gly	Ile	Glu	Ala	Lys					
				290					295					300					
Lys	Asn	Val	Val	Val	Thr	Gln	Ala	Asp	Gln	Ile	Gly	Pro	Leu	Pro					
				305					310					315					
Ser	Thr	Leu	Ile	Lys	Ser	Val	Asp	Trp	Leu	Leu	Val	Phe	Ser	Leu					
				320					325					330					
Phe	Phe	Leu	Ile	Ser	Phe	Ile	Met	Tyr	Ala	Thr	Ile	Arg	Thr	Glu					
				335					340					345					
Ser	Ile	Arg	Trp	Leu	Ile	Pro	Gly	Gln	Glu	Gln	Glu	His	Val	Glu					
				350					355					360					

<210> 411  
 <211> 24

<212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 411  
 cacagagcca gaagtggcgg aatc 24  
  
 <210> 412  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 412  
 ccacatgttc ctgctcttgc cctgg 25  
  
 <210> 413  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 413  
 cggtagtgac tgtactctag tcctgtttta caccocgtgg tgccg 45  
  
 <210> 414  
 <211> 1196  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 414  
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 ggctcggcgc gggggtctt cctctttggc cagcccgact tctcctacaa 150  
 gcgcagcaat tgcaagccca tcccggtcaa cctgcagctg tgccacggca 200  
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 aaggaggtgc tggagcaggc cggcgcttgg atcccgctgg tcatgaagca 300  
 gtgccacccg gacaccaaga agttcctgtg ctgcgtcttc gccccgtct 350  
 gcctcgatga cctagacgag accatccagc catgccactc gctctgcgtg 400  
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 gcccgacatg cttgagtgcg accgtttccc ccaggacaac gacctttgca 500  
 tccccctcgc tagcagcgac cacctcctgc cagccaccga ggaagctcca 550

aaggatgtg aagcctgcaa aaataaaaat gatgatgaca acgacataat 600  
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taacctacat caaccgagat accaaaatca tcttgagac caagagcaag 700  
accatttaca agctgaacgg tgtgtccgaa agggacctga agaaatcggt 750  
gctgtggctc aaagacagct tgcagtgcac ctgtgaggag atgaacgaca 800  
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ctcccgcagc atccgcaagc tgcagtgcac gtcccggcat cctgatggct 950  
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agcttcccc tgccttttgc acgtttgcat cccagcatt tctgagttta 1100  
taaggccaca ggagtggata gctgttttca cctaaaggaa aagcccaccc 1150  
gaatcttgta gaaatattca aactaataaa atcatgaata ttttaa 1196

<210> 415  
<211> 295  
<212> PRT  
<213> Homo sapiens

<400> 415  
Met Leu Gln Gly Pro Gly Ser Leu Leu Leu Leu Phe Leu Ala Ser  
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His Cys Cys Leu Gly Ser Ala Arg Gly Leu Phe Leu Phe Gly Gln  
20 25 30  
Pro Asp Phe Ser Tyr Lys Arg Ser Asn Cys Lys Pro Ile Pro Val  
35 40 45  
Asn Leu Gln Leu Cys His Gly Ile Glu Tyr Gln Asn Met Arg Leu  
50 55 60  
Pro Asn Leu Leu Gly His Glu Thr Met Lys Glu Val Leu Glu Gln  
65 70 75  
Ala Gly Ala Trp Ile Pro Leu Val Met Lys Gln Cys His Pro Asp  
80 85 90  
Thr Lys Lys Phe Leu Cys Ser Leu Phe Ala Pro Val Cys Leu Asp  
95 100 105  
Asp Leu Asp Glu Thr Ile Gln Pro Cys His Ser Leu Cys Val Gln  
110 115 120  
Val Lys Asp Arg Cys Ala Pro Val Met Ser Ala Phe Gly Phe Pro  
125 130 135

Trp	Pro	Asp	Met	Leu	Glu	Cys	Asp	Arg	Phe	Pro	Gln	Asp	Asn	Asp	140	145	150
Leu	Cys	Ile	Pro	Leu	Ala	Ser	Ser	Asp	His	Leu	Leu	Pro	Ala	Thr	155	160	165
Glu	Glu	Ala	Pro	Lys	Val	Cys	Glu	Ala	Cys	Lys	Asn	Lys	Asn	Asp	170	175	180
Asp	Asp	Asn	Asp	Ile	Met	Glu	Thr	Leu	Cys	Lys	Asn	Asp	Phe	Ala	185	190	195
Leu	Lys	Ile	Lys	Val	Lys	Glu	Ile	Thr	Tyr	Ile	Asn	Arg	Asp	Thr	200	205	210
Lys	Ile	Ile	Leu	Glu	Thr	Lys	Ser	Lys	Thr	Ile	Tyr	Lys	Leu	Asn	215	220	225
Gly	Val	Ser	Glu	Arg	Asp	Leu	Lys	Lys	Ser	Val	Leu	Trp	Leu	Lys	230	235	240
Asp	Ser	Leu	Gln	Cys	Thr	Cys	Glu	Glu	Met	Asn	Asp	Ile	Asn	Ala	245	250	255
Pro	Tyr	Leu	Val	Met	Gly	Gln	Lys	Gln	Gly	Gly	Glu	Leu	Val	Ile	260	265	270
Thr	Ser	Val	Lys	Arg	Trp	Gln	Lys	Gly	Gln	Arg	Glu	Phe	Lys	Arg	275	280	285
Ile	Ser	Arg	Ser	Ile	Arg	Lys	Leu	Gln	Cys						290	295	

<210> 416

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 416

cctggctcgc tgctgctgct c 21

<210> 417

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 417

cctcacaggt gcactgcaag ctgtc 25

<210> 418

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 418

ctcttcctct ttggccagcc cgacttctcc tacaagcgca gaattgc 47

<210> 419

<211> 1830

<212> DNA

<213> Homo sapiens

<400> 419

gtggaggccg ccgacgatgg cggggccgac ggaggccgag acgggggttg 50

ccgagccccg ggccctgtgc gcgcagcggg gccaccgcac ctacgcgcgc 100

cgctgggtgt tcctgctcgc gatcagcctg ctcaactgct ccaacgccac 150

gctgtggctc agctttgcac ctgtggctga cgtcattgct gaggacttgg 200

tcctgtccat ggagcagatc aactggctgt cactggtcta cctcgtggta 250

tccaccccat ttggcgtggc ggccatctgg atcctggact cgtcgggct 300

ccgtgcggcg accatcctgg gtgcgtggct gaactttgcc gggagtgtgc 350

tacgcatggt gccctgcatg gttgttggga cccaaaaccc atttgccttc 400

ctcatgggtg gccagagcct ctgtgccctt gccagagacc tggatcatctt 450

ctctccagcc aagctggctg ccttgtgggt cccagagcac cagcgagcca 500

cggccaacat gctcgccacc atgtcgaacc ctctgggcgt ccttgtggcc 550

aatgtgctgt cccctgtgct ggtcaagaag ggtgaggaca ttccgttaat 600

gctcgggtgc tataccatcc ctgctggcgt cgtctgcctg ctgtccacca 650

tctgcctgtg ggagagtgtg cccccaccc cgccctctgc cggggctgcc 700

agctccacct cagagaagtt cctggatggg ctcaagctgc agctcatgtg 750

gaacaaggcc tatgtcatcc tggtgtgtg cttgggggga atgatcggga 800

tctctgccag cttctcagcc ctctggagc agatcctctg tgcaagcggc 850

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gatcctgggg gcaactggctc tcggccccta tgtggaccgg accaagcact 950

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 aatgacggca ctgactgtgc gacgctcgga gccgtccttg tccacctgcc 1250  
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 tgagcgctt gtagtccagg ttgcccgcca catcgatgga ggcgaactgg 1750  
 aacatctggt ccacctgcgg gcgggggcca aagggtcctc tcggggctcc 1800  
 gggagcgaat tacaagcgcg cacctgaaaa 1830

<210> 420  
 <211> 560  
 <212> PRT  
 <213> Homo sapiens

<400> 420  
 Met Ala Gly Pro Thr Glu Ala Glu Thr Gly Leu Ala Glu Pro Arg  
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 Ala Leu Cys Ala Gln Arg Gly His Arg Thr Tyr Ala Arg Arg Trp  
 20 25 30  
 Val Phe Leu Leu Ala Ile Ser Leu Leu Asn Cys Ser Asn Ala Thr  
 35 40 45  
 Leu Trp Leu Ser Phe Ala Pro Val Ala Asp Val Ile Ala Glu Asp  
 50 55 60  
 Leu Val Leu Ser Met Glu Gln Ile Asn Trp Leu Ser Leu Val Tyr  
 65 70 75  
 Leu Val Val Ser Thr Pro Phe Gly Val Ala Ala Ile Trp Ile Leu  
 80 85 90  
 Asp Ser Val Gly Leu Arg Ala Ala Thr Ile Leu Gly Ala Trp Leu  
 95 100 105  
 Asn Phe Ala Gly Ser Val Leu Arg Met Val Pro Cys Met Val Val

	110		115		120
Gly Thr Gln Asn Pro Phe Ala Phe Leu Met Gly Gly Gln Ser Leu	125		130		135
Cys Ala Leu Ala Gln Ser Leu Val Ile Phe Ser Pro Ala Lys Leu	140		145		150
Ala Ala Leu Trp Phe Pro Glu His Gln Arg Ala Thr Ala Asn Met	155		160		165
Leu Ala Thr Met Ser Asn Pro Leu Gly Val Leu Val Ala Asn Val	170		175		180
Leu Ser Pro Val Leu Val Lys Lys Gly Glu Asp Ile Pro Leu Met	185		190		195
Leu Gly Val Tyr Thr Ile Pro Ala Gly Val Val Cys Leu Leu Ser	200		205		210
Thr Ile Cys Leu Trp Glu Ser Val Pro Pro Thr Pro Pro Ser Ala	215		220		225
Gly Ala Ala Ser Ser Thr Ser Glu Lys Phe Leu Asp Gly Leu Lys	230		235		240
Leu Gln Leu Met Trp Asn Lys Ala Tyr Val Ile Leu Ala Val Cys	245		250		255
Leu Gly Gly Met Ile Gly Ile Ser Ala Ser Phe Ser Ala Leu Leu	260		265		270
Glu Gln Ile Leu Cys Ala Ser Gly His Ser Ser Gly Phe Ser Gly	275		280		285
Leu Cys Gly Ala Leu Phe Ile Thr Phe Gly Ile Leu Gly Ala Leu	290		295		300
Ala Leu Gly Pro Tyr Val Asp Arg Thr Lys His Phe Thr Glu Ala	305		310		315
Thr Lys Ile Gly Leu Cys Leu Phe Ser Leu Ala Cys Val Pro Phe	320		325		330
Ala Leu Val Ser Gln Leu Gln Gly Gln Thr Leu Ala Leu Ala Ala	335		340		345
Thr Cys Ser Leu Leu Gly Leu Phe Gly Phe Ser Val Gly Pro Val	350		355		360
Ala Met Glu Leu Ala Val Glu Cys Ser Phe Pro Val Gly Glu Gly	365		370		375
Ala Ala Thr Gly Met Ile Phe Val Leu Gly Gln Ala Glu Gly Ile	380		385		390
Leu Ile Met Leu Ala Met Thr Ala Leu Thr Val Arg Arg Ser Glu	395		400		405



Pro	Ser	Leu	Ser	Thr	Cys	Gln	Gln	Gly	Glu	Asp	Pro	Leu	Asp	Trp
				410					415					420
Thr	Val	Ser	Leu	Leu	Leu	Met	Ala	Gly	Leu	Cys	Thr	Phe	Phe	Ser
				425					430					435
Cys	Ile	Leu	Ala	Val	Phe	Phe	His	Thr	Pro	Tyr	Arg	Arg	Leu	Gln
				440					445					450
Ala	Glu	Ser	Gly	Glu	Pro	Pro	Ser	Thr	Arg	Asn	Ala	Val	Gly	Gly
				455					460					465
Ala	Asp	Ser	Gly	Pro	Gly	Val	Asp	Arg	Gly	Gly	Ala	Gly	Arg	Ala
				470					475					480
Gly	Val	Leu	Gly	Pro	Ser	Thr	Ala	Thr	Pro	Glu	Cys	Thr	Ala	Arg
				485					490					495
Gly	Ala	Ser	Leu	Glu	Asp	Pro	Arg	Gly	Pro	Gly	Ser	Pro	His	Pro
				500					505					510
Ala	Cys	His	Arg	Ala	Thr	Pro	Arg	Ala	Gln	Gly	Pro	Ala	Ala	Thr
				515					520					525
Asp	Ala	Pro	Ser	Arg	Pro	Gly	Arg	Leu	Ala	Gly	Arg	Val	Gln	Ala
				530					535					540
Ser	Arg	Phe	Ile	Asp	Pro	Ala	Gly	Ser	His	Ser	Ser	Phe	Ser	Ser
				545					550					555
Pro	Trp	Val	Ile	Thr										
				560										

<210> 421  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 421  
 agcttctcag ccctcctgga gcag 24

<210> 422  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 422  
 cgggtcaata aacctggacg cttgg 25

<210> 423  
 <211> 43  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 423

tatgtggacc ggaccaagca cttcactgag gccaccaaga ttg 43

<210> 424

<211> 4313

<212> DNA

<213> Homo sapiens

<400> 424

gtcccacatc ctgctcaact gggtcaggtc cctcttagac cagctcttgt 50  
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tggcaattct tgatcggcgt ttggacatct cagatcgctt ccaatgaaga 150  
tggccttgcc ttggggctct gcttggttca taatcatcta actatgggac 200  
aaggttgtgc cggcagctct gggggaagga gcacggggct gatcaagcca 250  
tccaggaaac actggaggac ttgtccagcc ttgaaagaac tctagtgggt 300  
tctgaatcta gccacttg cggtaagcat gatgcaactt ctgcaacttc 350  
tgctggggct tttggggcca ggtggetact tatttctttt aggggattgt 400  
caggaggtga ccactctcac ggtgaaatac caagtgtcag aggaagtgcc 450  
atctggtaca gtgatcggga agctgtccca ggaactgggc cgggaggaga 500  
ggcggaggca agctggggcc gccttcaggt tgttgacagc gcctcaggcg 550  
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tctcccagtg agcactttgc cttggatgtc attgtgggcc ctgatgagac 900  
caaacatgca gaactcatag tggatgaagga gctggacagg gaaatccatt 950  
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cctaccgcca gcagcccaag aggccccaga aacacattca gaaggcagac 2650  
atccacctcg tgctgtgct caggggtcag gcaggtgagc cttgtgaagt 2700  
cgggcagtcc cacaagatg tggacaagga ggcgatgatg gaagcaggct 2750  
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gctgcaagac acggtcaacc tccttttcaa ccatcccagg cagaggaatg 2900  
cctcccggga gaacctgaac cttcccgagc ccagcctgc cacaggccag 2950  
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gaatcagggc ccgctcagat cctgcggagc ctggtccggc tgtctgtggc 3150  
tgcttcgcc gagcggaacc ccgtggagga gctcactgtg gattctctc 3200  
ctgttcagca aatctcccag ctgctgtcct tgctgcatca gggccaattc 3250  
cagcccaaac caaaccaccg aggaaataag tacttggcca agccaggagg 3300  
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ctgatgctac cccacagag gaggcaagag cccaggact aacagctgac 4050  
 tgaccaaagc agccccttgt aagcagctct gaggacaggg 4100  
 acggtttggtg gctgagataa gtgtttcctg gcaaaacata tgtggagcac 4150  
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 aaaggggtggc cttcttgggt agcaggagtc aggggggctgt accctggggg 4250  
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 aaaaaaaaaa aaa 4313

<210> 425  
 <211> 1184  
 <212> PRT  
 <213> Homo sapiens

<400> 425  
 Met Met Gln Leu Leu Gln Leu Leu Leu Gly Leu Leu Gly Pro Gly  
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 Gly Tyr Leu Phe Leu Leu Gly Asp Cys Gln Glu Val Thr Thr Leu  
 20 25 30  
 Thr Val Lys Tyr Gln Val Ser Glu Glu Val Pro Ser Gly Thr Val  
 35 40 45  
 Ile Gly Lys Leu Ser Gln Glu Leu Gly Arg Glu Glu Arg Arg Arg  
 50 55 60  
 Gln Ala Gly Ala Ala Phe Gln Val Leu Gln Leu Pro Gln Ala Leu  
 65 70 75  
 Pro Ile Gln Val Asp Ser Glu Glu Gly Leu Leu Ser Thr Gly Arg  
 80 85 90  
 Arg Leu Asp Arg Glu Gln Leu Cys Arg Gln Trp Asp Pro Cys Leu  
 95 100 105  
 Val Ser Phe Asp Val Leu Ala Thr Gly Asp Leu Ala Leu Ile His  
 110 115 120  
 Val Glu Ile Gln Val Leu Asp Ile Asn Asp His Gln Pro Arg Phe  
 125 130 135  
 Pro Lys Gly Glu Gln Glu Leu Glu Ile Ser Glu Ser Ala Ser Leu  
 140 145 150  
 Arg Thr Arg Ile Pro Leu Asp Arg Ala Leu Asp Pro Asp Thr Gly  
 155 160 165  
 Pro Asn Thr Leu His Thr Tyr Thr Leu Ser Pro Ser Glu His Phe  
 170 175 180  
 Ala Leu Asp Val Ile Val Gly Pro Asp Glu Thr Lys His Ala Glu  
 185 190 195

Leu	Ile	Val	Val	Lys	Glu	Leu	Asp	Arg	Glu	Ile	His	Ser	Phe	Phe	200	205	210
Asp	Leu	Val	Leu	Thr	Ala	Tyr	Asp	Asn	Gly	Asn	Pro	Pro	Lys	Ser	215	220	225
Gly	Thr	Ser	Leu	Val	Lys	Val	Asn	Val	Leu	Asp	Ser	Asn	Asp	Asn	230	235	240
Ser	Pro	Ala	Phe	Ala	Glu	Ser	Ser	Leu	Ala	Leu	Glu	Ile	Gln	Glu	245	250	255
Asp	Ala	Ala	Pro	Gly	Thr	Leu	Leu	Ile	Lys	Leu	Thr	Ala	Thr	Asp	260	265	270
Pro	Asp	Gln	Gly	Pro	Asn	Gly	Glu	Val	Glu	Phe	Phe	Leu	Ser	Lys	275	280	285
His	Met	Pro	Pro	Glu	Val	Leu	Asp	Thr	Phe	Ser	Ile	Asp	Ala	Lys	290	295	300
Thr	Gly	Gln	Val	Ile	Leu	Arg	Arg	Pro	Leu	Asp	Tyr	Glu	Lys	Asn	305	310	315
Pro	Ala	Tyr	Glu	Val	Asp	Val	Gln	Ala	Arg	Asp	Leu	Gly	Pro	Asn	320	325	330
Pro	Ile	Pro	Ala	His	Cys	Lys	Val	Leu	Ile	Lys	Val	Leu	Asp	Val	335	340	345
Asn	Asp	Asn	Ile	Pro	Ser	Ile	His	Val	Thr	Trp	Ala	Ser	Gln	Pro	350	355	360
Ser	Leu	Val	Ser	Glu	Ala	Leu	Pro	Lys	Asp	Ser	Phe	Ile	Ala	Leu	365	370	375
Val	Met	Ala	Asp	Asp	Leu	Asp	Ser	Gly	His	Asn	Gly	Leu	Val	His	380	385	390
Cys	Trp	Leu	Ser	Gln	Glu	Leu	Gly	His	Phe	Arg	Leu	Lys	Arg	Thr	395	400	405
Asn	Gly	Asn	Thr	Tyr	Met	Leu	Leu	Thr	Asn	Ala	Thr	Leu	Asp	Arg	410	415	420
Glu	Gln	Trp	Pro	Lys	Tyr	Thr	Leu	Thr	Leu	Leu	Ala	Gln	Asp	Gln	425	430	435
Gly	Leu	Gln	Pro	Leu	Ser	Ala	Lys	Lys	Gln	Leu	Ser	Ile	Gln	Ile	440	445	450
Ser	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Val	Phe	Glu	Lys	Ser	Arg	Tyr	455	460	465
Glu	Val	Ser	Thr	Arg	Glu	Asn	Asn	Leu	Pro	Ser	Leu	His	Leu	Ile	470	475	480
Thr	Ile	Lys	Ala	His	Asp	Ala	Asp	Leu	Gly	Ile	Asn	Gly	Lys	Val			

485	490	495
Ser Tyr Arg Ile Gln Asp Ser Pro Val	Ala His Leu Val Ala	Ile
500	505	510
Asp Ser Asn Thr Gly Glu Val Thr Ala	Gln Arg Ser Leu Asn Tyr	
515	520	525
Glu Glu Met Ala Gly Phe Glu Phe Gln	Val Ile Ala Glu Asp Ser	
530	535	540
Gly Gln Pro Met Leu Ala Ser Ser Val	Ser Val Trp Val Ser Leu	
545	550	555
Leu Asp Ala Asn Asp Asn Ala Pro Glu	Val Val Gln Pro Val Leu	
560	565	570
Ser Asp Gly Lys Ala Ser Leu Ser Val	Leu Val Asn Ala Ser Thr	
575	580	585
Gly His Leu Leu Val Pro Ile Glu Thr	Pro Asn Gly Leu Gly Pro	
590	595	600
Ala Gly Thr Asp Thr Pro Pro Leu Ala	Thr His Ser Ser Arg Pro	
605	610	615
Phe Leu Leu Thr Thr Ile Val Ala Arg	Asp Ala Asp Ser Gly Ala	
620	625	630
Asn Gly Glu Pro Leu Tyr Ser Ile Arg	Asn Gly Asn Glu Ala His	
635	640	645
Leu Phe Ile Leu Asn Pro His Thr Gly	Gln Leu Phe Val Asn Val	
650	655	660
Thr Asn Ala Ser Ser Leu Ile Gly Ser	Glu Trp Glu Leu Glu Ile	
665	670	675
Val Val Glu Asp Gln Gly Ser Pro Pro	Leu Gln Thr Arg Ala Leu	
680	685	690
Leu Arg Val Met Phe Val Thr Ser Val	Asp His Leu Arg Asp Ser	
695	700	705
Ala Arg Lys Pro Gly Ala Leu Ser Met	Ser Met Leu Thr Val Ile	
710	715	720
Cys Leu Ala Val Leu Leu Gly Ile Phe	Gly Leu Ile Leu Ala Leu	
725	730	735
Phe Met Ser Ile Cys Arg Thr Glu Lys	Lys Asp Asn Arg Ala Tyr	
740	745	750
Asn Cys Arg Glu Ala Glu Ser Thr Tyr	Arg Gln Gln Pro Lys Arg	
755	760	765
Pro Gln Lys His Ile Gln Lys Ala Asp	Ile His Leu Val Pro Val	
770	775	780

Leu Arg Gly Gln	Ala Gly Glu Pro Cys	Glu Val Gly Gln Ser His	785	790	795
Lys Asp Val Asp	Lys Glu Ala Met Met	Glu Ala Gly Trp Asp Pro	800	805	810
Cys Leu Gln Ala	Pro Phe His Leu Thr	Pro Thr Leu Tyr Arg Thr	815	820	825
Leu Arg Asn Gln	Gly Asn Gln Gly Ala	Pro Ala Glu Ser Arg Glu	830	835	840
Val Leu Gln Asp	Thr Val Asn Leu Leu	Phe Asn His Pro Arg Gln	845	850	855
Arg Asn Ala Ser	Arg Glu Asn Leu Asn	Leu Pro Glu Pro Gln Pro	860	865	870
Ala Thr Gly Gln	Pro Arg Ser Arg Pro	Leu Lys Val Ala Gly Ser	875	880	885
Pro Thr Gly Arg	Leu Ala Gly Asp Gln	Gly Ser Glu Glu Ala Pro	890	895	900
Gln Arg Pro Pro	Ala Ser Ser Ala Thr	Leu Arg Arg Gln Arg His	905	910	915
Leu Asn Gly Lys	Val Ser Pro Glu Lys	Glu Ser Gly Pro Arg Gln	920	925	930
Ile Leu Arg Ser	Leu Val Arg Leu Ser	Val Ala Ala Phe Ala Glu	935	940	945
Arg Asn Pro Val	Glu Glu Leu Thr Val	Asp Ser Pro Pro Val Gln	950	955	960
Gln Ile Ser Gln	Leu Leu Ser Leu Leu	His Gln Gly Gln Phe Gln	965	970	975
Pro Lys Pro Asn	His Arg Gly Asn Lys	Tyr Leu Ala Lys Pro Gly	980	985	990
Gly Ser Arg Ser	Ala Ile Pro Asp Thr	Asp Gly Pro Ser Ala Arg	995	1000	1005
Ala Gly Gly Gln	Thr Asp Pro Glu Gln	Glu Glu Gly Pro Leu Asp	1010	1015	1020
Pro Glu Glu Asp	Leu Ser Val Lys Gln	Leu Leu Glu Glu Glu Leu	1025	1030	1035
Ser Ser Leu Leu	Asp Pro Ser Thr Gly	Leu Ala Leu Asp Arg Leu	1040	1045	1050
Ser Ala Pro Asp	Pro Ala Trp Met Ala	Arg Leu Ser Leu Pro Leu	1055	1060	1065
Thr Thr Asn Tyr	Arg Asp Asn Val Ile	Ser Pro Asp Ala Ala Ala			



1070	1075	1080
Thr Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Ala Glu Ala		
1085	1090	1095
Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val		
1100	1105	1110
Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Glu Gln Arg Ser		
1115	1120	1125
Ser Met Pro Val Glu Ala Ala Ser Glu Ala Leu Arg Arg Leu Ser		
1130	1135	1140
Val Cys Gly Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Ala Ala		
1145	1150	1155
Ser Gly Met Lys Val Gln Gly Asp Pro Gly Gly Lys Thr Gly Thr		
1160	1165	1170
Glu Gly Lys Ser Arg Gly Ser Ser Ser Ser Ser Arg Cys Leu		
1175	1180	

<210> 426  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 426  
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<210> 427  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 427  
 gtgacgtgga tgcttgggat gttg 24

<210> 428  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 428  
 tggacacctt cagtattgat gccaaagacag gccaggtcat tctgcgtcga 50

<210> 429  
 <211> 2037

<212> DNA

<213> Homo sapiens

<400> 429

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ggcctcgggg agtgggaagt ggaggcagga gccttcctta cacttcgcca 150  
tgagtttctt catcgactcc agcatcatga ttacctccca gatactatgt 200  
tttggatttg ggtggctttt cttcatgcgc caattgttta aagactatga 250  
gatacgtcag tatgttgtag aggtgatctt ctccgtgacg tttgcatttt 300  
cttgcaccat gtttgagctc atcatctttg aaatcttagg agtattgaat 350  
agcagctccc gttattttca ctggaaaatg aacctgtgtg taattctgct 400  
gatcctgggt ttcattgggt ctttttacct tggctatttt attgtgagca 450  
atatccgact actgcataaa caacgactgc ttttttcctg tctcttatgg 500  
ctgaccttta tgtattttct ctggaaacta ggagatccct tccccattct 550  
cagcccaaaa catgggatct tatccataga acagctcatc agccgggttg 600  
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aactgcccac acacttacat gtcttacttc ctgaggaatg tgactgacac 700  
ggatattcta gccctggaac ggcgactgct gcaaaccatg gatatgatca 750  
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ggggaagtgc ataacaaacc atcagggttc tggggaatga taaaaagtgt 850  
taccattca gcatcaggaa gtgaaaatct tactcttatt caacaggaag 900  
tggtgctttt ggaagaatta agcaggcagc tttttctgga aacagctgat 950  
ctatatgcta ccaaggagag aatagaatac tccaaaacct tcaaggggaa 1000  
atattttaat tttcttggtt actttttctc tattttactgt gtttggaaaa 1050  
ttttcatggc taccatcaat attgtttttg atcgagttgg gaaaacggat 1100  
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tcacgtcac atccatcaga ggattgtgta tcaactctac caagttcttt 1250  
tatgccatct ctagcagtaa gtccccaat gtcattgtcc tgctattagc 1300  
acagataatg ggcattgact ttgtctctc tgtgctgctg atccgaatga 1350

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 cagttcaact tctatcacgc ttggtttgat gtgatcttcc tggtcagcgc 1450  
 tctctctagc atactcttcc tctatttggc tcacaaacag gcaccagaga 1500  
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 cattttataa acaaacaaaa tgctatggta gcatttttca ctttcatagc 1650  
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 aacatgagag ggagaactaa ctcaagacaa tactcagcag agagcatccc 1750  
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 gtgaaaaata cactggaact ctggggcaag acatgtctat ggtagctgag 1850  
 ccaaacacgt aggatttccg ttttaagggtt cacatggaaa aggttatagc 1900  
 tttgccttga gattgactca ttaaaatcag agactgtaac aaaaaaaaaa 1950  
 aaaaaaaaaa agggcgggcg cgactctaga gtcgacctgc agaagcttgg 2000  
 ccgccatggc ccaacttggt tattgcagct tataatg 2037

<210> 430  
 <211> 455  
 <212> PRT  
 <213> Homo sapiens

<400> 430

Met	Ser	Phe	Leu	Ile	Asp	Ser	Ser	Ile	Met	Ile	Thr	Ser	Gln	Ile
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Leu	Phe	Phe	Gly	Phe	Gly	Trp	Leu	Phe	Phe	Met	Arg	Gln	Leu	Phe
			20						25					30
Lys	Asp	Tyr	Glu	Ile	Arg	Gln	Tyr	Val	Val	Gln	Val	Ile	Phe	Ser
			35						40					45
Val	Thr	Phe	Ala	Phe	Ser	Cys	Thr	Met	Phe	Glu	Leu	Ile	Ile	Phe
			50						55					60
Glu	Ile	Leu	Gly	Val	Leu	Asn	Ser	Ser	Ser	Arg	Tyr	Phe	His	Trp
			65						70					75
Lys	Met	Asn	Leu	Cys	Val	Ile	Leu	Leu	Ile	Leu	Val	Phe	Met	Val
			80						85					90
Pro	Phe	Tyr	Ile	Gly	Tyr	Phe	Ile	Val	Ser	Asn	Ile	Arg	Leu	Leu
			95						100					105
His	Lys	Gln	Arg	Leu	Leu	Phe	Ser	Cys	Leu	Leu	Trp	Leu	Thr	Phe
			110						115					120

Met	Tyr	Phe	Phe	Trp	Lys	Leu	Gly	Asp	Pro	Phe	Pro	Ile	Leu	Ser	125	130	135
Pro	Lys	His	Gly	Ile	Leu	Ser	Ile	Glu	Gln	Leu	Ile	Ser	Arg	Val	140	145	150
Gly	Val	Ile	Gly	Val	Thr	Leu	Met	Ala	Leu	Leu	Ser	Gly	Phe	Gly	155	160	165
Ala	Val	Asn	Cys	Pro	Tyr	Thr	Tyr	Met	Ser	Tyr	Phe	Leu	Arg	Asn	170	175	180
Val	Thr	Asp	Thr	Asp	Ile	Leu	Ala	Leu	Glu	Arg	Arg	Leu	Leu	Gln	185	190	195
Thr	Met	Asp	Met	Ile	Ile	Ser	Lys	Lys	Lys	Arg	Met	Ala	Met	Ala	200	205	210
Arg	Arg	Thr	Met	Phe	Gln	Lys	Gly	Glu	Val	His	Asn	Lys	Pro	Ser	215	220	225
Gly	Phe	Trp	Gly	Met	Ile	Lys	Ser	Val	Thr	Thr	Ser	Ala	Ser	Gly	230	235	240
Ser	Glu	Asn	Leu	Thr	Leu	Ile	Gln	Gln	Glu	Val	Asp	Ala	Leu	Glu	245	250	255
Glu	Leu	Ser	Arg	Gln	Leu	Phe	Leu	Glu	Thr	Ala	Asp	Leu	Tyr	Ala	260	265	270
Thr	Lys	Glu	Arg	Ile	Glu	Tyr	Ser	Lys	Thr	Phe	Lys	Gly	Lys	Tyr	275	280	285
Phe	Asn	Phe	Leu	Gly	Tyr	Phe	Phe	Ser	Ile	Tyr	Cys	Val	Trp	Lys	290	295	300
Ile	Phe	Met	Ala	Thr	Ile	Asn	Ile	Val	Phe	Asp	Arg	Val	Gly	Lys	305	310	315
Thr	Asp	Pro	Val	Thr	Arg	Gly	Ile	Glu	Ile	Thr	Val	Asn	Tyr	Leu	320	325	330
Gly	Ile	Gln	Phe	Asp	Val	Lys	Phe	Trp	Ser	Gln	His	Ile	Ser	Phe	335	340	345
Ile	Leu	Val	Gly	Ile	Ile	Ile	Val	Thr	Ser	Ile	Arg	Gly	Leu	Leu	350	355	360
Ile	Thr	Leu	Thr	Lys	Phe	Phe	Tyr	Ala	Ile	Ser	Ser	Ser	Lys	Ser	365	370	375
Ser	Asn	Val	Ile	Val	Leu	Leu	Leu	Ala	Gln	Ile	Met	Gly	Met	Tyr	380	385	390
Phe	Val	Ser	Ser	Val	Leu	Leu	Ile	Arg	Met	Ser	Met	Pro	Leu	Glu	395	400	405
Tyr	Arg	Thr	Ile	Ile	Thr	Glu	Val	Leu	Gly	Glu	Leu	Gln	Phe	Asn			

410	415	420
Phe Tyr His Arg Trp Phe Asp Val Ile	Phe Leu Val Ser Ala Leu	
425	430	435
Ser Ser Ile Leu Phe Leu Tyr Leu Ala His Lys Gln Ala Pro Glu		
440	445	450
Lys Gln Met Ala Pro		
455		

<210> 431  
 <211> 407  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 78, 81, 113, 157, 224, 297  
 <223> unknown base

<400> 431  
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 tcgactccag catcatgatt acctccnga nactattttt tggatttggg 100  
 tggcttttct tcngcgccaa tgtttaaaga ctatgagata cgtcagtatg 150  
 ttgtacnggt gatcttctcc gtgacgtttg ccatttcttg caccatgttt 200  
 gagctcatca tctttgaaat cttnggagta ttgaatagca gctcccgtta 250  
 ttttactgg aaaatgaacc tgtgtgtaat tctgctgac ctggttntca 300  
 tgggtgccttt ttacattggc tattttattg tgagcaatat ccgactactg 350  
 cataaacaac gactgctttt ttctgtctc ttatggctga cttttatgta 400  
 tttccag 407

<210> 432  
 <211> 457  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 31, 66, 81-82, 84, 122, 184, 187, 232, 241, 400, 424, 427, 434  
 <223> unknown base

<400> 432  
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 gccaaagggt tctttnttga attccgggt nngnatacct tcccagaaaa 100  
 tatttttttg atttggggta gntttttttc atgcgccaat tgtttaaaga 150  
 ctatgagata cgtcagtatg ttgtacaggt gatnttntcc gtgacgtttg 200

cattttcttg caccatgttt gagtcatca tnttgaaat nttaggagta 250  
 ttgaatagca gctcccgta ttttactgg aaaatgaacc tgtgtgtaat 300  
 tctgctgac ctggttttca tggcgcttt ttacattggc tattttattg 350  
 tgagcaatat ccgactactg cataaacaac gactgctttt ttctgtctn 400  
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 cattctc 457

<210> 433  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 433  
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<210> 434  
 <211> 22  
 <212> DNA  
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<220>  
 <223> Synthetic oligonucleotide probe

<400> 434  
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<210> 435  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 435  
 attgtttaa gactatgaga tacgtcagta tgttgtaacag g 41

<210> 436  
 <211> 3951  
 <212> DNA  
 <213> Homo sapiens

<400> 436  
 ctgcgcagg gatcgccca tggccggggc tggagccgc gacccttggg 50  
 gggcctccgg gatttgctac ctttttggct cctgctcgt cgaactgctc 100  
 ttctcacggg ctgctgcctt caatctggac gtgatgggtg ccttgcgcaa 150  
 ggagggcgag ccaggcagcc tcttcggctt ctctgtggcc ctgcaccggc 200

agttgcagcc ccgaccccag agctggctgc tggtaggtgc tccccaggcc 250  
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 tccctacgag gcggggggag agaaggagca ggacccccgc ctcatcccgg 800  
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 tgccccctac ttctttgagc gccagaaga gctggggggg gctgtgtatg 1100  
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<210> 437

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 437

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Ala	Val	Ala	Phe	Asn	Leu	Asp	Val	Met	Gly	Ala	Leu	Arg	Lys	Glu	
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Gly	Glu	Pro	Gly	Ser	Leu	Phe	Gly	Phe	Ser	Val	Ala	Leu	His	Arg	
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Gln	Leu	Gln	Pro	Arg	Pro	Gln	Ser	Trp	Leu	Leu	Val	Gly	Ala	Pro	
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Gln	Ala	Leu	Ala	Leu	Pro	Gly	Gln	Gln	Ala	Asn	Arg	Thr	Gly	Gly	

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Leu	Phe	Ala	Cys	Pro	Leu	Ser	Leu	Glu	Glu	Thr	Asp	Cys	Tyr	Arg					
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Val	Asp	Ile	Asp	Gln	Gly	Ala	Asp	Met	Gln	Lys	Glu	Ser	Lys	Glu					
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Asn	Gln	Trp	Leu	Gly	Val	Ser	Val	Arg	Ser	Gln	Gly	Pro	Gly	Gly					
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Lys	Ile	Val	Thr	Cys	Ala	His	Arg	Tyr	Glu	Ala	Arg	Gln	Arg	Val					
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Asp	Gln	Ile	Leu	Glu	Thr	Arg	Asp	Met	Ile	Gly	Arg	Cys	Phe	Val					
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Leu	Ser	Gln	Asp	Leu	Ala	Ile	Arg	Asp	Glu	Leu	Asp	Gly	Gly	Glu					
				170					175					180					
Trp	Lys	Phe	Cys	Glu	Gly	Arg	Pro	Gln	Gly	His	Glu	Gln	Phe	Gly					
				185					190					195					
Phe	Cys	Gln	Gln	Gly	Thr	Ala	Ala	Ala	Phe	Ser	Pro	Asp	Ser	His					
				200					205					210					
Tyr	Leu	Leu	Phe	Gly	Ala	Pro	Gly	Thr	Tyr	Asn	Trp	Lys	Gly	Thr					
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Ala	Arg	Val	Glu	Leu	Cys	Ala	Gln	Gly	Ser	Ala	Asp	Leu	Ala	His					
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Leu	Asp	Asp	Gly	Pro	Tyr	Glu	Ala	Gly	Gly	Glu	Lys	Glu	Gln	Asp					
				245					250					255					
Pro	Arg	Leu	Ile	Pro	Val	Pro	Ala	Asn	Ser	Tyr	Phe	Gly	Phe	Ser					
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Ile	Asp	Ser	Gly	Lys	Gly	Leu	Val	Arg	Ala	Glu	Glu	Leu	Ser	Phe					
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Val	Ala	Gly	Ala	Pro	Arg	Ala	Asn	His	Lys	Gly	Ala	Val	Val	Ile					
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Leu	Arg	Lys	Asp	Ser	Ala	Ser	Arg	Leu	Val	Pro	Glu	Val	Met	Leu					
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Ser	Gly	Glu	Arg	Leu	Thr	Ser	Gly	Phe	Gly	Tyr	Ser	Leu	Ala	Val					
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Ala	Asp	Leu	Asn	Ser	Asp	Gly	Trp	Pro	Asp	Leu	Ile	Val	Gly	Ala					
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Pro	Tyr	Phe	Phe	Glu	Arg	Gln	Glu	Glu	Leu	Gly	Gly	Ala	Val	Tyr					
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Val	Tyr	Leu	Asn	Gln	Gly	Gly	His	Trp	Ala	Gly	Ile	Ser	Pro	Leu					
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Arg	Leu	Cys	Gly	Ser	Pro	Asp	Ser	Met	Phe	Gly	Ile	Ser	Leu	Ala	380	385	390
Val	Leu	Gly	Asp	Leu	Asn	Gln	Asp	Gly	Phe	Pro	Asp	Ile	Ala	Val	395	400	405
Gly	Ala	Pro	Phe	Asp	Gly	Asp	Gly	Lys	Val	Phe	Ile	Tyr	His	Gly	410	415	420
Ser	Ser	Leu	Gly	Val	Val	Ala	Lys	Pro	Ser	Gln	Val	Leu	Glu	Gly	425	430	435
Glu	Ala	Val	Gly	Ile	Lys	Ser	Phe	Gly	Tyr	Ser	Leu	Ser	Gly	Ser	440	445	450
Leu	Asp	Met	Asp	Gly	Asn	Gln	Tyr	Pro	Asp	Leu	Leu	Val	Gly	Ser	455	460	465
Leu	Ala	Asp	Thr	Ala	Val	Leu	Phe	Arg	Ala	Arg	Pro	Ile	Leu	His	470	475	480
Val	Ser	His	Glu	Val	Ser	Ile	Ala	Pro	Arg	Ser	Ile	Asp	Leu	Glu	485	490	495
Gln	Pro	Asn	Cys	Ala	Gly	Gly	His	Ser	Val	Cys	Val	Asp	Leu	Arg	500	505	510
Val	Cys	Phe	Ser	Tyr	Ile	Ala	Val	Pro	Ser	Ser	Tyr	Ser	Pro	Thr	515	520	525
Val	Ala	Leu	Asp	Tyr	Val	Leu	Asp	Ala	Asp	Thr	Asp	Arg	Arg	Leu	530	535	540
Arg	Gly	Gln	Val	Pro	Arg	Val	Thr	Phe	Leu	Ser	Arg	Asn	Leu	Glu	545	550	555
Glu	Pro	Lys	His	Gln	Ala	Ser	Gly	Thr	Val	Trp	Leu	Lys	His	Gln	560	565	570
His	Asp	Arg	Val	Cys	Gly	Asp	Ala	Met	Phe	Gln	Leu	Gln	Glu	Asn	575	580	585
Val	Lys	Asp	Lys	Leu	Arg	Ala	Ile	Val	Val	Thr	Leu	Ser	Tyr	Ser	590	595	600
Leu	Gln	Thr	Pro	Arg	Leu	Arg	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	605	610	615
Pro	Pro	Val	Ala	Pro	Ile	Leu	Asn	Ala	His	Gln	Pro	Ser	Thr	Gln	620	625	630
Arg	Ala	Glu	Ile	His	Phe	Leu	Lys	Gln	Gly	Cys	Gly	Glu	Asp	Lys	635	640	645
Ile	Cys	Gln	Ser	Asn	Leu	Gln	Leu	Val	His	Ala	Arg	Phe	Cys	Thr	650	655	660
Arg	Val	Ser	Asp	Thr	Glu	Phe	Gln	Pro	Leu	Pro	Met	Asp	Val	Asp			

665					670					675				
Gly	Thr	Thr	Ala	Leu	Phe	Ala	Leu	Ser	Gly	Gln	Pro	Val	Ile	Gly
				680					685					690
Leu	Glu	Leu	Met	Val	Thr	Asn	Leu	Pro	Ser	Asp	Pro	Ala	Gln	Pro
				695					700					705
Gln	Ala	Asp	Gly	Asp	Asp	Ala	His	Glu	Ala	Gln	Leu	Leu	Val	Met
				710					715					720
Leu	Pro	Asp	Ser	Leu	His	Tyr	Ser	Gly	Val	Arg	Ala	Leu	Asp	Pro
				725					730					735
Ala	Glu	Lys	Pro	Leu	Cys	Leu	Ser	Asn	Glu	Asn	Ala	Ser	His	Val
				740					745					750
Glu	Cys	Glu	Leu	Gly	Asn	Pro	Met	Lys	Arg	Gly	Ala	Gln	Val	Thr
				755					760					765
Phe	Tyr	Leu	Ile	Leu	Ser	Thr	Ser	Gly	Ile	Ser	Ile	Glu	Thr	Thr
				770					775					780
Glu	Leu	Glu	Val	Glu	Leu	Leu	Leu	Ala	Thr	Ile	Ser	Glu	Gln	Glu
				785					790					795
Leu	His	Pro	Val	Ser	Ala	Arg	Ala	Arg	Val	Phe	Ile	Glu	Leu	Pro
				800					805					810
Leu	Ser	Ile	Ala	Gly	Met	Ala	Ile	Pro	Gln	Gln	Leu	Phe	Phe	Ser
				815					820					825
Gly	Val	Val	Arg	Gly	Glu	Arg	Ala	Met	Gln	Ser	Glu	Arg	Asp	Val
				830					835					840
Gly	Ser	Lys	Val	Lys	Tyr	Glu	Val	Thr	Val	Ser	Asn	Gln	Gly	Gln
				845					850					855
Ser	Leu	Arg	Thr	Leu	Gly	Ser	Ala	Phe	Leu	Asn	Ile	Met	Trp	Pro
				860					865					870
His	Glu	Ile	Ala	Asn	Gly	Lys	Trp	Leu	Leu	Tyr	Pro	Met	Gln	Val
				875					880					885
Glu	Leu	Glu	Gly	Gly	Gln	Gly	Pro	Gly	Gln	Lys	Gly	Leu	Cys	Ser
				890					895					900
Pro	Arg	Pro	Asn	Ile	Leu	His	Leu	Asp	Val	Asp	Ser	Arg	Asp	Arg
				905					910					915
Arg	Arg	Arg	Glu	Leu	Glu	Pro	Pro	Glu	Gln	Gln	Glu	Pro	Gly	Glu
				920					925					930
Arg	Gln	Glu	Pro	Ser	Met	Ser	Trp	Trp	Pro	Val	Ser	Ser	Ala	Glu
				935					940					945
Lys	Lys	Lys	Asn	Ile	Thr	Leu	Asp	Cys	Ala	Arg	Gly	Thr	Ala	Asn
				950					955					960

Cys Val Val Phe Ser Cys Pro Leu Tyr Ser Phe Asp Arg Ala Ala  
 965 970 975  
 Val Leu His Val Trp Gly Arg Leu Trp Asn Ser Thr Phe Leu Glu  
 980 985 990  
 Glu Tyr Ser Ala Val Lys Ser Leu Glu Val Ile Val Arg Ala Asn  
 995 1000 1005  
 Ile Thr Val Lys Ser Ser Ile Lys Asn Leu Met Leu Arg Asp Ala  
 1010 1015 1020  
 Ser Thr Val Ile Pro Val Met Val Tyr Leu Asp Pro Met Ala Val  
 1025 1030 1035  
 Val Ala Glu Gly Val Pro Trp Trp Val Ile Leu Leu Ala Val Leu  
 1040 1045 1050  
 Ala Gly Leu Leu Val Leu Ala Leu Leu Val Leu Leu Leu Trp Lys  
 1055 1060 1065  
 Met Gly Phe Phe Lys Arg Ala Lys His Pro Glu Ala Thr Val Pro  
 1070 1075 1080  
 Gln Tyr His Ala Val Lys Ile Pro Arg Glu Asp Arg Gln Gln Phe  
 1085 1090 1095  
 Lys Glu Glu Lys Thr Gly Thr Ile Leu Arg Asn Asn Trp Gly Ser  
 1100 1105 1110  
 Pro Arg Arg Glu Gly Pro Asp Ala His Pro Ile Leu Ala Ala Asp  
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 Gly His Pro Glu Leu Gly Pro Asp Gly His Pro Gly Pro Gly Thr  
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<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 438

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<210> 439

<211> 24

<212> DNA

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<223> Synthetic oligonucleotide probe

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<210> 440  
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<210> 441  
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<213> Homo sapiens

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 aattctaagt gaaattttaa ataaataaat ttttaatgac ctgggtctta 1850  
 aggatttagg aaaaatatgc atgctttaat tgcatttcca aagtagcatc 1900  
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 aaaaaaaaaa aaaa 1964

<210> 442  
 <211> 436  
 <212> PRT  
 <213> Homo sapiens

<400> 442  
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 Gly Arg Ser Asp Gly Gly Asn Phe Leu Asp Asp Lys Gln Trp Leu  
 35 40 45  
 Thr Thr Ile Ser Gln Tyr Asp Lys Glu Val Gly Gln Trp Asn Lys

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Phe	Arg	Asp	Glu	Val	Glu	Asp	Asp	Tyr	Phe	Arg	Thr	Trp	Ser	Pro
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Gly	Lys	Pro	Phe	Asp	Gln	Ala	Leu	Asp	Pro	Ala	Lys	Asp	Pro	Cys
				80					85					90
Leu	Lys	Met	Lys	Cys	Ser	Arg	His	Lys	Val	Cys	Ile	Ala	Gln	Asp
				95					100					105
Ser	Gln	Thr	Ala	Val	Cys	Ile	Ser	His	Arg	Arg	Leu	Thr	His	Arg
				110					115					120
Met	Lys	Glu	Ala	Gly	Val	Asp	His	Arg	Gln	Trp	Arg	Gly	Pro	Ile
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Leu	Ser	Thr	Cys	Lys	Gln	Cys	Pro	Val	Val	Tyr	Pro	Ser	Pro	Val
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Cys	Gly	Ser	Asp	Gly	His	Thr	Tyr	Ser	Phe	Gln	Cys	Lys	Leu	Glu
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Tyr	Gln	Ala	Cys	Val	Leu	Gly	Lys	Gln	Ile	Ser	Val	Lys	Cys	Glu
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Gly	His	Cys	Pro	Cys	Pro	Ser	Asp	Lys	Pro	Thr	Ser	Thr	Ser	Arg
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Asn	Val	Lys	Arg	Ala	Cys	Ser	Asp	Leu	Glu	Phe	Arg	Glu	Val	Ala
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Asn	Arg	Leu	Arg	Asp	Trp	Phe	Lys	Ala	Leu	His	Glu	Ser	Gly	Ser
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Gln	Asn	Lys	Lys	Thr	Lys	Thr	Leu	Leu	Arg	Pro	Glu	Arg	Ser	Arg
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Phe	Asp	Thr	Ser	Ile	Leu	Pro	Ile	Cys	Lys	Asp	Ser	Leu	Gly	Trp
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Met	Phe	Asn	Arg	Leu	Asp	Thr	Asn	Tyr	Asp	Leu	Leu	Leu	Asp	Gln
				260					265					270
Ser	Glu	Leu	Arg	Ser	Ile	Tyr	Leu	Asp	Lys	Asn	Glu	Gln	Cys	Thr
				275					280					285
Lys	Ala	Phe	Phe	Asn	Ser	Cys	Asp	Thr	Tyr	Lys	Asp	Ser	Leu	Ile
				290					295					300
Ser	Asn	Asn	Glu	Trp	Cys	Tyr	Cys	Phe	Gln	Arg	Gln	Gln	Asp	Pro
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Pro	Cys	Gln	Thr	Glu	Leu	Ser	Asn	Ile	Gln	Lys	Arg	Gln	Gly	Val
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Lys	Lys	Leu	Leu	Gly	Gln	Tyr	Ile	Pro	Leu	Cys	Asp	Glu	Asp	Gly
				335					340					345



Tyr	Tyr	Lys	Pro	Thr	Gln	Cys	His	Gly	Ser	Val	Gly	Gln	Cys	Trp
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Cys	Val	Asp	Arg	Tyr	Gly	Asn	Glu	Val	Met	Gly	Ser	Arg	Ile	Asn
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Gly	Val	Ala	Asp	Cys	Ala	Ile	Asp	Phe	Glu	Ile	Ser	Gly	Asp	Phe
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Ala	Ser	Gly	Asp	Phe	His	Glu	Trp	Thr	Asp	Asp	Glu	Asp	Asp	Glu
				395					400					405
Asp	Asp	Ile	Met	Asn	Asp	Glu	Asp	Glu	Ile	Glu	Asp	Asp	Asp	Glu
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Asp	Glu	Gly	Asp	Asp	Asp	Asp	Gly	Gly	Asp	Asp	His	Asp	Val	Tyr
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 443  
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<210> 444  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 444  
 catcatgggc atcaccacca tcatcatc 28

<210> 445  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 445  
 ggttactaca agccaacaca atgtcatggc agtggtggac agtgctgg 48

<210> 446  
 <211> 3617  
 <212> DNA  
 <213> Homo sapiens

<400> 446

cagactccag atttccctgt caaccacgag gagtccagag aggaaacgcg 50  
gagcggagac aacagtaoct gacgcctctt tcagcccggg atcgccccag 100  
cagggatggg cgacaagatc tggctgcctt tccccgtgct ccttctggcc 150  
gctctgcctc cgggtgctgt gcctggggcg gccggcttca caccttccct 200  
cgatagcgac ttcaocttta cccttcccg cggccagaag gagtgttct 250  
accagcccat gccctgaag gcctcgctgg agatcgagta ccaagtttta 300  
gatggagcag gattagatat tgatttccat cttgcctctc cagaaggcaa 350  
aaccttagtt tttgaacaaa gaaaatcaga tggagttcac actgtagaga 400  
ctgaagttgg tgattacatg ttctgctttg acaatacatt cagcaccatt 450  
tctgagaagg tgattttctt tgaattaatc ctggataata tgggagaaca 500  
ggcacaagaa caagaagatt ggaagaaata tattactggc acagatatat 550  
tggatatgaa actggaagac atcctggaat ccatcaacag catcaagtcc 600  
agactaagca aaagtgggca catacaaatt ctgcttagag catttgaagc 650  
tcgtgatcga aacatacaag aaagcaactt tgatagagtc aatttctggt 700  
ctatgggttaa tttagtggc atgggtgggtg tgtcagccat tcaagtttat 750  
atgctgaaga gtctgtttga agataagagg aaaagtagaa cttaaaactc 800  
caaactagag tacgtaacat tgaaaaatga ggcataaaaa tgcaataaac 850  
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aaagtaggaa acaggtataa ttttaatgtg aaaattaagt cttcactttc 950  
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ttaaaaaacac aaagttacac ttactaaaat taggacatgt tttctctttg 1500  
 aaatgaagaa tatagtttaa aagcttcctc ctccataggg acacattttc 1550  
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 taagtttatt ttaataagta tctgtcaagt taatatctgt caacagttaa 1650  
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 agaatttaga aaaacttgag aaaacctaata ccaaaataaa attcacttaa 1850  
 gtagaactat aaataaatat ctagaatctg actggctcat catgacatcc 1900  
 tactcataac ataaatcaaa ggagatgatt aatttccagt tagctggaag 1950  
 aaactttggc tgtaggtttt tattttctac aagaattctg gtttgaatta 2000  
 tttttgtaag caggtaacatt ttataaaatg taagccctac tgtaaggttt 2050  
 agcactgggt gtacatattt attaaaaatt tttattataa caacttttat 2100  
 taaaatggcc tttctgaaca ctttatttat tgatgttgaa gtaaggatta 2150  
 gaaacataga ctccaagtt ttaaacacct aaatgtgaat aacccatata 2200  
 tacaacaaag tttctgccat ctagcttttt gaagtctatg ggggtcttac 2250  
 tcaagtacta gtaatttaac ttcacatga atgaactata atttttaagt 2300  
 tatgccatt tataacgttg tttatgacta cattgtgagt tagaaacaaa 2350  
 cttaaaattt ggggtataga acccctcaac aggttagtaa tgctggaatt 2400  
 cttgatgagc aataatgata accagagagt gatttcattt acactcatag 2450  
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 aaattatcaa aggaaaa 3617

<210> 447  
 <211> 229  
 <212> PRT  
 <213> Homo sapiens

<400> 447  
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 Ala Leu Pro Pro Val Leu Leu Pro Gly Ala Ala Gly Phe Thr Pro  
 20 25 30  
 Ser Leu Asp Ser Asp Phe Thr Phe Thr Leu Pro Ala Gly Gln Lys  
 35 40 45  
 Glu Cys Phe Tyr Gln Pro Met Pro Leu Lys Ala Ser Leu Glu Ile  
 50 55 60  
 Glu Tyr Gln Val Leu Asp Gly Ala Gly Leu Asp Ile Asp Phe His  
 65 70 75  
 Leu Ala Ser Pro Glu Gly Lys Thr Leu Val Phe Glu Gln Arg Lys  
 80 85 90  
 Ser Asp Gly Val His Thr Val Glu Thr Glu Val Gly Asp Tyr Met  
 95 100 105  
 Phe Cys Phe Asp Asn Thr Phe Ser Thr Ile Ser Glu Lys Val Ile

110	115	120
Phe Phe Glu Leu Ile Leu Asp Asn Met Gly Glu Gln Ala Gln Glu		
125	130	135
Gln Glu Asp Trp Lys Lys Tyr Ile Thr Gly Thr Asp Ile Leu Asp		
140	145	150
Met Lys Leu Glu Asp Ile Leu Glu Ser Ile Asn Ser Ile Lys Ser		
155	160	165
Arg Leu Ser Lys Ser Gly His Ile Gln Ile Leu Leu Arg Ala Phe		
170	175	180
Glu Ala Arg Asp Arg Asn Ile Gln Glu Ser Asn Phe Asp Arg Val		
185	190	195
Asn Phe Trp Ser Met Val Asn Leu Val Val Met Val Val Val Ser		
200	205	210
Ala Ile Gln Val Tyr Met Leu Lys Ser Leu Phe Glu Asp Lys Arg		
215	220	225
Lys Ser Arg Thr		

<210> 448  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 448  
 cccagcaggg ctgggcgaca aga 23

<210> 449  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 449  
 gtcttccagt ttcatatcca ata 23

<210> 450  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 450  
 ccagaaggag cacggggaag ggcagccaga tcttgtcgcc cat 43

<210> 451  
 <211> 859  
 <212> DNA  
 <213> Homo sapiens

<400> 451  
 ccacccctga gatcttttta taaaaaaccc agtctttgct gaccagacaa 50  
 agcataccag atctcaccag agagtcgcag acactatgct gcctcccatg 100  
 gccctgcccc gtgtgtcctg gatgctgctt tcctgcctca ttctcctgtg 150  
 tcaggttcaa ggtgaagaaa ccagaagga actgccctct ccacggatca 200  
 gctgtcccaa aggctccaag gcctatggct cccctgcta tgccttggtt 250  
 ttgtcaccaa aatcctggat ggatgcagat ctggcttgcc agaagcggcc 300  
 ctctggaaaa ctggtgtctg tgctcagtg ggctgagga tccttcgtgt 350  
 cctccctggt gaggagcatt agtaacagct actcatacat ctggattggg 400  
 ctccatgacc ccacacagg ctctgagcct gatggagatg gatgggagtg 450  
 gagtagcact gatgtgatga attactttgc atgggagaaa aatccctcca 500  
 ccactttaaa ccctggccac tgtgggagcc tgtcaagaag cacaggattt 550  
 ctgaagtgga aagattataa ctgtgatgca aagttaccct atgtctgcaa 600  
 gttcaaggac tagggcaggt gggaagtcag cagcctcagc ttggcgtgca 650  
 gctcatcatg gacatgagac cagtgtgaag actcaccctg gaagagaata 700  
 ttctcccaa actgccctac ctgactacct tgcatgatc ctcttcttt 750  
 ttcttttttc ttcaccttca ttccaggctt ttctctgtct tccatgtctt 800  
 gagatctcag agaataataa taaaatggt actttataaa aaaaaaaaaa 850  
 aaaaaaaaaa 859

<210> 452  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 452  
 Met Leu Pro Pro Met Ala Leu Pro Ser Val Ser Trp Met Leu Leu  
 1 5 10 15  
 Ser Cys Leu Ile Leu Leu Cys Gln Val Gln Gly Glu Glu Thr Gln  
 20 25 30  
 Lys Glu Leu Pro Ser Pro Arg Ile Ser Cys Pro Lys Gly Ser Lys  
 35 40 45  
 Ala Tyr Gly Ser Pro Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser

50	55	60
Trp Met Asp Ala Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly Lys		
65	70	75
Leu Val Ser Val Leu Ser Gly Ala Glu Gly Ser Phe Val Ser Ser		
80	85	90
Leu Val Arg Ser Ile Ser Asn Ser Tyr Ser Tyr Ile Trp Ile Gly		
95	100	105
Leu His Asp Pro Thr Gln Gly Ser Glu Pro Asp Gly Asp Gly Trp		
110	115	120
Glu Trp Ser Ser Thr Asp Val Met Asn Tyr Phe Ala Trp Glu Lys		
125	130	135
Asn Pro Ser Thr Ile Leu Asn Pro Gly His Cys Gly Ser Leu Ser		
140	145	150
Arg Ser Thr Gly Phe Leu Lys Trp Lys Asp Tyr Asn Cys Asp Ala		
155	160	165
Lys Leu Pro Tyr Val Cys Lys Phe Lys Asp		
170	175	

<210> 453  
 <211> 550  
 <212> DNA  
 <213> Homo sapiens

<400> 453  
 ccagctctgtc gccacctcac ttggtgtctg ctgtccccgc caggcaagcc 50  
 tgggggtgaga gcacagagga gtggggccggg accatgcggg ggacgcggct 100  
 ggcgctcctg gcgctggtgc tggctgcctg cggagagctg gcgccggccc 150  
 tgcgctgcta cgtctgtccg gagccacacag gagtgtcgga ctgtgtcacc 200  
 atcgccacct gcaccaccaa cgaaaccatg tgcaagacca cactctactc 250  
 ccgggagata gtgtaccct tccaggggga ctccacggtg accaagtcct 300  
 gtgccagcaa gtgtaagccc tcggatgtgg atggcatcgg ccagaccctg 350  
 ccggtgtcct gctgcaatac tgagctgtgc aatgtagacg gggcgcccgc 400  
 tctgaacagc ctccactgcg gggccctcac gctcctccca ctcttgagcc 450  
 tccgactgta gagtccccgc ccacccccat ggccttatgc ggcccagccc 500  
 cgaatgcctt gaagaagtgc cccctgcacc agggaaaaaa aaaaaaaaaa 550

<210> 454  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 454

Met Arg Gly Thr Arg Leu Ala Leu Leu Ala Leu Val Leu Ala Ala  
1 5 10 15  
Cys Gly Glu Leu Ala Pro Ala Leu Arg Cys Tyr Val Cys Pro Glu  
20 25 30  
Pro Thr Gly Val Ser Asp Cys Val Thr Ile Ala Thr Cys Thr Thr  
35 40 45  
Asn Glu Thr Met Cys Lys Thr Thr Leu Tyr Ser Arg Glu Ile Val  
50 55 60  
Tyr Pro Phe Gln Gly Asp Ser Thr Val Thr Lys Ser Cys Ala Ser  
65 70 75  
Lys Cys Lys Pro Ser Asp Val Asp Gly Ile Gly Gln Thr Leu Pro  
80 85 90  
Val Ser Cys Cys Asn Thr Glu Leu Cys Asn Val Asp Gly Ala Pro  
95 100 105  
Ala Leu Asn Ser Leu His Cys Gly Ala Leu Thr Leu Leu Pro Leu  
110 115 120  
Leu Ser Leu Arg Leu  
125

<210> 455

<211> 1518

<212> DNA

<213> Homo sapiens

<400> 455

ctgcagtcag gactctggga ccgcaggggg ctcccggacc ctgactctgc 50  
agccgaaccg gcacggtttc gtggggaccc aggcttgcaa agtgacggtc 100  
attttctctt tctttctccc tcttgagtcc ttctgagatg atggctctgg 150  
gcgcagcggg agctaccggg gtctttgtcg cgatggtagc ggcggctctc 200  
ggcggccacc ctctgctggg agtgagcgcc accttgaact cggttctcaa 250  
ttccaacgct atcaagaacc tgccccacc gctgggcggc gctgcggggc 300  
accagggctc tgcagtcagc gccgcgccg gaatcctgta cccgggcggg 350  
aataagtacc agaccattga caactaccag ccgtaccctg gcgcagagga 400  
cgaggagtgc ggcaactgat agtactgcgc tagtcccacc cgcggagggg 450  
acgcaggcgt gcaaactctgt ctgcctgca ggaagcgccg aaaacgctgc 500  
atgcgtcacg ctatgtgctg ccccggaat tactgcaaaa atggaatatg 550  
tgtgtcttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600



ctgaaagctt tggtaatgat catagcacct tggatgggta ttccagaaga 650  
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 tctgggtccaa gatctgtaaa cctgtcctga aagaagggtca agtgtgtacc 800  
 aagcatagga gaaaaggctc tcatggacta gaaatattcc agcgttggtta 850  
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 gtaattcttc taggcttcac acttgtcaga gacactaaac cagctatcca 950  
 aatgcagtga actcctttta tataatagat gctatgaaaa ccttttatga 1000  
 ccttcatcaa ctcaatccta aggatataca agttctgtgg tttcagttaa 1050  
 gcattccaat aacaccttcc aaaaacctgg agtgtaagag ctttgtttct 1100  
 ttatggaact cccctgtgat tgcagtaaat tactgtattg taaattctca 1150  
 gtgtggcact tacctgtaaa tgcaatgaaa cttttaatta tttttctaaa 1200  
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 tttcagctta tagttcttaa aagcataacc ctttacccca tttaattcta 1350  
 gagtctagaa cgcaaggatc tcttggaatg acaaatgata ggtacctaaa 1400  
 atgtaacatg aaaatactag cttattttct gaaatgtact atcttaatgc 1450  
 ttaaattata tttcccttta ggctgtgata gtttttgaaa taaaatttaa 1500  
 catttaaaaa aaaaaaaaa 1518

<210> 456  
 <211> 266  
 <212> PRT  
 <213> Homo sapiens

<400> 456  
 Met Met Ala Leu Gly Ala Ala Gly Ala Thr Arg Val Phe Val Ala  
 1 5 10 15  
 Met Val Ala Ala Ala Leu Gly Gly His Pro Leu Leu Gly Val Ser  
 20 25 30  
 Ala Thr Leu Asn Ser Val Leu Asn Ser Asn Ala Ile Lys Asn Leu  
 35 40 45  
 Pro Pro Pro Leu Gly Gly Ala Ala Gly His Pro Gly Ser Ala Val  
 50 55 60  
 Ser Ala Ala Pro Gly Ile Leu Tyr Pro Gly Gly Asn Lys Tyr Gln  
 65 70 75

Thr Ile Asp Asn Tyr Gln Pro Tyr Pro Cys Ala Glu Asp Glu Glu  
 80 85 90  
 Cys Gly Thr Asp Glu Tyr Cys Ala Ser Pro Thr Arg Gly Gly Asp  
 95 100 105  
 Ala Gly Val Gln Ile Cys Leu Ala Cys Arg Lys Arg Arg Lys Arg  
 110 115 120  
 Cys Met Arg His Ala Met Cys Cys Pro Gly Asn Tyr Cys Lys Asn  
 125 130 135  
 Gly Ile Cys Val Ser Ser Asp Gln Asn His Phe Arg Gly Glu Ile  
 140 145 150  
 Glu Glu Thr Ile Thr Glu Ser Phe Gly Asn Asp His Ser Thr Leu  
 155 160 165  
 Asp Gly Tyr Ser Arg Arg Thr Thr Leu Ser Ser Lys Met Tyr His  
 170 175 180  
 Thr Lys Gly Gln Glu Gly Ser Val Cys Leu Arg Ser Ser Asp Cys  
 185 190 195  
 Ala Ser Gly Leu Cys Cys Ala Arg His Phe Trp Ser Lys Ile Cys  
 200 205 210  
 Lys Pro Val Leu Lys Glu Gly Gln Val Cys Thr Lys His Arg Arg  
 215 220 225  
 Lys Gly Ser His Gly Leu Glu Ile Phe Gln Arg Cys Tyr Cys Gly  
 230 235 240  
 Glu Gly Leu Ser Cys Arg Ile Gln Lys Asp His His Gln Ala Ser  
 245 250 255  
 Asn Ser Ser Arg Leu His Thr Cys Gln Arg His  
 260 265

<210> 457

<211> 638

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 123, 133, 139, 180, 214, 259, 282, 308, 452, 467, 471, 473,  
509, 556

<223> unknown base

<400> 457

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catttttttt tctttctcct tcnngagtcc ttntgagang atggttttgg 150

gcgcagcggg agctaaccg gttttttgtg gcgatggtag cggcggtttt 200

cggcgggccac cttntgctgg gagtgagcgc caccttgaat cggttttcaa 250  
 ttccaacgnt atcaagaacc tgccccacc gntggggcggc gctgcggggc 300  
 acccaggntt tgcagtcagc gccgcgcggg gaatcctgta cccgggagg 350  
 aataagtacc agaccattga caattaccag ccgtaccgt gcgcagagga 400  
 cgaggagtgc ggcactgatg agtactgcgc tagtcccacc cgcggagggg 450  
 angcgggcgt gcaaatntgt ntngcctgca ggaagcgccg aaaacgctgc 500  
 atgcgtcang ctatgtgctg ccccggaat tactgcaaaa atggaatatg 550  
 tgtgtnttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600  
 ctgaaagctt tggtaatgat catagcacct tggatggg 638

<210> 458

<211> 4040

<212> DNA

<213> Homo sapiens

<400> 458

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 ttctctcctg caccggtgc ttgggctcgg ccaggcgggg tccgcccca 150  
 gggtttgagg atgggggagt agctacagga agcgaccccg cgatggcaag 200  
 gtatatTTTT gtggaatgaa aaggaagtat tagaaatgag ctgaagacca 250  
 ttcacagatt aatatttttg gggacagatt tgtgatgctt gattcacct 300  
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 accagcagtg aatcttaatg ttcacttaaa tcagaacttg cataagaaag 400  
 agaatgggag tctgggttaa taaagatgac tatatcagag acttgaaaag 450  
 gatcattctc tgttttctga tagtgtatat ggccatttta gtgggcacag 500  
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 gaaataagac aagctttcaa gaaattggca ttgaagttac atcctgataa 600  
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 catatgaagt actcaaagat gaagatctac ggaaaaagta tgacaaatat 700  
 ggagaaaagg gacttgagga taatcaaggt ggccagtatg aaagctggaa 750  
 ctattatcgt tatgattttg gtatttatga tgatgatcct gaaatcataa 800  
 cattggaaag aagagaattt gatgctgctg ttaattctgg agaactgtgg 850

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 ctgttaactg tggatgatgat agaatgcttt gccgaatgaa aggagtcaac 1000  
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 acccaccacc ttcaacgaac tagttacaca aagaaaacac aacgaagtct 2000  
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<210> 459  
 <211> 747  
 <212> PRT  
 <213> Homo sapiens

<400> 459  
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 Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr  
 35 40 45  
 Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu  
 50 55 60  
 Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly  
 65 70 75  
 Asp Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu  
 80 85 90  
 Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu  
 95 100 105  
 Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr  
 110 115 120  
 Asp Phe Gly Ile Tyr Asp Asp Asp Pro Glu Ile Ile Thr Leu Glu  
 125 130 135  
 Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe  
 140 145 150  
 Val Asn Phe Tyr Ser Pro Gly Cys Ser His Cys His Asp Leu Ala  
 155 160 165  
 Pro Thr Trp Arg Asp Phe Ala Lys Glu Val Asp Gly Leu Leu Arg  
 170 175 180  
 Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met  
 185 190 195  
 Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly

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Met	Ala	Pro	Val	Lys	Tyr	His	Gly	Asp	Arg	Ser	Lys	Glu	Ser	Leu			
				215					220					225			
Val	Ser	Phe	Ala	Met	Gln	His	Val	Arg	Ser	Thr	Val	Thr	Glu	Leu			
				230					235					240			
Trp	Thr	Gly	Asn	Phe	Val	Asn	Ser	Ile	Gln	Thr	Ala	Phe	Ala	Ala			
				245					250					255			
Gly	Ile	Gly	Trp	Leu	Ile	Thr	Phe	Cys	Ser	Lys	Gly	Gly	Asp	Cys			
				260					265					270			
Leu	Thr	Ser	Gln	Thr	Arg	Leu	Arg	Leu	Ser	Gly	Met	Leu	Phe	Leu			
				275					280					285			
Asn	Ser	Leu	Asp	Ala	Lys	Glu	Ile	Tyr	Leu	Glu	Val	Ile	His	Asn			
				290					295					300			
Leu	Pro	Asp	Phe	Glu	Leu	Leu	Ser	Ala	Asn	Thr	Leu	Glu	Asp	Arg			
				305					310					315			
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				320					325					330			
Glu	Asn	Ser	Asn	Asp	Pro	Glu	Leu	Lys	Lys	Leu	Lys	Thr	Leu	Leu			
				335					340					345			
Lys	Asn	Asp	His	Ile	Gln	Val	Gly	Arg	Phe	Asp	Cys	Ser	Ser	Ala			
				350					355					360			
Pro	Asp	Ile	Cys	Ser	Asn	Leu	Tyr	Val	Phe	Gln	Pro	Ser	Leu	Ala			
				365					370					375			
Val	Phe	Lys	Gly	Gln	Gly	Thr	Lys	Glu	Tyr	Glu	Ile	His	His	Gly			
				380					385					390			
Lys	Lys	Ile	Leu	Tyr	Asp	Ile	Leu	Ala	Phe	Ala	Lys	Glu	Ser	Val			
				395					400					405			
Asn	Ser	His	Val	Thr	Thr	Leu	Gly	Pro	Gln	Asn	Phe	Pro	Ala	Asn			
				410					415					420			
Asp	Lys	Glu	Pro	Trp	Leu	Val	Asp	Phe	Phe	Ala	Pro	Trp	Cys	Pro			
				425					430					435			
Pro	Cys	Arg	Ala	Leu	Leu	Pro	Glu	Leu	Arg	Arg	Ala	Ser	Asn	Leu			
				440					445					450			
Leu	Tyr	Gly	Gln	Leu	Lys	Phe	Gly	Thr	Leu	Asp	Cys	Thr	Val	His			
				455					460					465			
Glu	Gly	Leu	Cys	Asn	Met	Tyr	Asn	Ile	Gln	Ala	Tyr	Pro	Thr	Thr			
				470					475					480			
Val	Val	Phe	Asn	Gln	Ser	Asn	Ile	His	Glu	Tyr	Glu	Gly	His	His			
				485					490					495			

Ser	Ala	Glu	Gln	Ile	Leu	Glu	Phe	Ile	Glu	Asp	Leu	Met	Asn	Pro	500	505	510
Ser	Val	Val	Ser	Leu	Thr	Pro	Thr	Thr	Phe	Asn	Glu	Leu	Val	Thr	515	520	525
Gln	Arg	Lys	His	Asn	Glu	Val	Trp	Met	Val	Asp	Phe	Tyr	Ser	Pro	530	535	540
Trp	Cys	His	Pro	Cys	Gln	Val	Leu	Met	Pro	Glu	Trp	Lys	Arg	Met	545	550	555
Ala	Arg	Thr	Leu	Thr	Gly	Leu	Ile	Asn	Val	Gly	Ser	Ile	Asp	Cys	560	565	570
Gln	Gln	Tyr	His	Ser	Phe	Cys	Ala	Gln	Glu	Asn	Val	Gln	Arg	Tyr	575	580	585
Pro	Glu	Ile	Arg	Phe	Phe	Pro	Pro	Lys	Ser	Asn	Lys	Ala	Tyr	Gln	590	595	600
Tyr	His	Ser	Tyr	Asn	Gly	Trp	Asn	Arg	Asp	Ala	Tyr	Ser	Leu	Arg	605	610	615
Ile	Trp	Gly	Leu	Gly	Phe	Leu	Pro	Gln	Val	Ser	Thr	Asp	Leu	Thr	620	625	630
Pro	Gln	Thr	Phe	Ser	Glu	Lys	Val	Leu	Gln	Gly	Lys	Asn	His	Trp	635	640	645
Val	Ile	Asp	Phe	Tyr	Ala	Pro	Trp	Cys	Gly	Pro	Cys	Gln	Asn	Phe	650	655	660
Ala	Pro	Glu	Phe	Glu	Leu	Leu	Ala	Arg	Met	Ile	Lys	Gly	Lys	Val	665	670	675
Lys	Ala	Gly	Lys	Val	Asp	Cys	Gln	Ala	Tyr	Ala	Gln	Thr	Cys	Gln	680	685	690
Lys	Ala	Gly	Ile	Arg	Ala	Tyr	Pro	Thr	Val	Lys	Phe	Tyr	Phe	Tyr	695	700	705
Glu	Arg	Ala	Lys	Arg	Asn	Phe	Gln	Glu	Glu	Gln	Ile	Asn	Thr	Arg	710	715	720
Asp	Ala	Lys	Ala	Ile	Ala	Ala	Leu	Ile	Ser	Glu	Lys	Leu	Glu	Thr	725	730	735
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<210> 460

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



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<210> 461  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 461  
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<210> 462  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 462  
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<210> 463  
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<212> DNA  
<213> Homo sapiens

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caccatcatc tactcctact tggagtcggt ggtgaagttt ttcattcctc 150  
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<210> 464

<211> 300

<212> PRT

<213> Homo sapiens

<400> 464

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Tyr Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg  
 20 25 30

Arg	Lys	Ser	Val	Ala	Gly	Glu	Ile	Val	Leu	Ile	Thr	Gly	Ala	Gly	35	40	45
His	Gly	Ile	Gly	Arg	Gln	Thr	Thr	Tyr	Glu	Phe	Ala	Lys	Arg	Gln	50	55	60
Ser	Ile	Leu	Val	Leu	Trp	Asp	Ile	Asn	Lys	Arg	Gly	Val	Glu	Glu	65	70	75
Thr	Ala	Ala	Glu	Cys	Arg	Lys	Leu	Gly	Val	Thr	Ala	His	Ala	Tyr	80	85	90
Val	Val	Asp	Cys	Ser	Asn	Arg	Glu	Glu	Ile	Tyr	Arg	Ser	Leu	Asn	95	100	105
Gln	Val	Lys	Lys	Glu	Val	Gly	Asp	Val	Thr	Ile	Val	Val	Asn	Asn	110	115	120
Ala	Gly	Thr	Val	Tyr	Pro	Ala	Asp	Leu	Leu	Ser	Thr	Lys	Asp	Glu	125	130	135
Glu	Ile	Thr	Lys	Thr	Phe	Glu	Val	Asn	Ile	Leu	Gly	His	Phe	Trp	140	145	150
Ile	Thr	Lys	Ala	Leu	Leu	Pro	Ser	Met	Met	Glu	Arg	Asn	His	Gly	155	160	165
His	Ile	Val	Thr	Val	Ala	Ser	Val	Cys	Gly	His	Glu	Gly	Ile	Pro	170	175	180
Tyr	Leu	Ile	Pro	Tyr	Cys	Ser	Ser	Lys	Phe	Ala	Ala	Val	Gly	Phe	185	190	195
His	Arg	Gly	Leu	Thr	Ser	Glu	Leu	Gln	Ala	Leu	Gly	Lys	Thr	Gly	200	205	210
Ile	Lys	Thr	Ser	Cys	Leu	Cys	Pro	Val	Phe	Val	Asn	Thr	Gly	Phe	215	220	225
Thr	Lys	Asn	Pro	Ser	Thr	Arg	Leu	Trp	Pro	Val	Leu	Glu	Thr	Asp	230	235	240
Glu	Val	Val	Arg	Ser	Leu	Ile	Asp	Gly	Ile	Leu	Thr	Asn	Lys	Lys	245	250	255
Met	Ile	Phe	Val	Pro	Ser	Tyr	Ile	Asn	Ile	Phe	Leu	Arg	Leu	Gln	260	265	270
Lys	Phe	Leu	Pro	Glu	Arg	Ala	Ser	Ala	Ile	Leu	Asn	Arg	Met	Gln	275	280	285
Asn	Ile	Gln	Phe	Glu	Ala	Val	Val	Gly	His	Lys	Ile	Lys	Met	Lys	290	295	300

<210> 465

<211> 1547

<212> DNA

<213> Homo sapiens

<400> 465

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gctgtggctg gtgctggggt cgggtttcat gatcctgctg atcatcgtgt 200  
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gcaatctggg cttcttggtc actccactgc ctctatccat tgagtactgt 1500

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<210> 466

<211> 414

<212> PRT

<213> Homo sapiens

<400> 466

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Val	Phe	Met	Ile	Leu	Leu	Ile	Ile	Val	Tyr	Trp	Asp	Ser	Ala	Gly
				20					25					30

Ala	Ala	His	Phe	Tyr	Leu	His	Thr	Ser	Phe	Ser	Arg	Pro	His	Thr
				35					40					45

Gly	Pro	Pro	Leu	Pro	Thr	Pro	Gly	Pro	Asp	Arg	Asp	Arg	Glu	Leu
				50					55					60

Thr	Ala	Asp	Ser	Asp	Val	Asp	Glu	Phe	Leu	Asp	Lys	Phe	Leu	Ser
				65					70					75

Ala	Gly	Val	Lys	Gln	Ser	Asp	Leu	Pro	Arg	Lys	Glu	Thr	Glu	Gln
				80					85					90

Pro	Pro	Ala	Pro	Gly	Ser	Met	Glu	Glu	Ser	Val	Arg	Gly	Tyr	Asp
				95					100					105

Trp	Ser	Pro	Arg	Asp	Ala	Arg	Arg	Ser	Pro	Asp	Gln	Gly	Arg	Gln
				110					115					120

Gln	Ala	Glu	Arg	Arg	Ser	Val	Leu	Arg	Gly	Phe	Cys	Ala	Asn	Ser
				125					130					135

Ser	Leu	Ala	Phe	Pro	Thr	Lys	Glu	Arg	Ala	Phe	Asp	Asp	Ile	Pro
				140					145					150

Asn	Ser	Glu	Leu	Ser	His	Leu	Ile	Val	Asp	Asp	Arg	His	Gly	Ala
				155					160					165

Ile	Tyr	Cys	Tyr	Val	Pro	Lys	Val	Ala	Cys	Thr	Asn	Trp	Lys	Arg
				170					175					180

Val	Met	Ile	Val	Leu	Ser	Gly	Ser	Leu	Leu	His	Arg	Gly	Ala	Pro
				185					190					195

Tyr	Arg	Asp	Pro	Leu	Arg	Ile	Pro	Arg	Glu	His	Val	His	Asn	Ala
				200					205					210

Ser	Ala	His	Leu	Thr	Phe	Asn	Lys	Phe	Trp	Arg	Arg	Tyr	Gly	Lys
				215					220					225

Leu	Ser	Arg	His	Leu	Met	Lys	Val	Lys	Leu	Lys	Lys	Tyr	Thr	Lys
				230					235					240

Phe	Leu	Phe	Val	Arg	Asp	Pro	Phe	Val	Arg	Leu	Ile	Ser	Ala	Phe	
				245					250					255	
Arg	Ser	Lys	Phe	Glu	Leu	Glu	Asn	Glu	Glu	Phe	Tyr	Arg	Lys	Phe	
				260					265					270	
Ala	Val	Pro	Met	Leu	Arg	Leu	Tyr	Ala	Asn	His	Thr	Ser	Leu	Pro	
				275					280					285	
Ala	Ser	Ala	Arg	Glu	Ala	Phe	Arg	Ala	Gly	Leu	Lys	Val	Ser	Phe	
				290					295					300	
Ala	Asn	Phe	Ile	Gln	Tyr	Leu	Leu	Asp	Pro	His	Thr	Glu	Lys	Leu	
				305					310					315	
Ala	Pro	Phe	Asn	Glu	His	Trp	Arg	Gln	Val	Tyr	Arg	Leu	Cys	His	
				320					325					330	
Pro	Cys	Gln	Ile	Asp	Tyr	Asp	Phe	Val	Gly	Lys	Leu	Glu	Thr	Leu	
				335					340					345	
Asp	Glu	Asp	Ala	Ala	Gln	Leu	Leu	Gln	Leu	Leu	Gln	Val	Asp	Arg	
				350					355					360	
Gln	Leu	Arg	Phe	Pro	Pro	Ser	Tyr	Arg	Asn	Arg	Thr	Ala	Ser	Ser	
				365					370					375	
Trp	Glu	Glu	Asp	Trp	Phe	Ala	Lys	Ile	Pro	Leu	Ala	Trp	Arg	Gln	
				380					385					390	
Gln	Leu	Tyr	Lys	Leu	Tyr	Glu	Ala	Asp	Phe	Val	Leu	Phe	Gly	Tyr	
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Pro	Lys	Pro	Glu	Asn	Leu	Leu	Arg	Asp							
				410											

<210> 467  
 <211> 1071  
 <212> DNA  
 <213> Homo sapiens

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 cccaggcagt tccctatgtg gccaccaagg gggcagtaac agccatgacc 600  
 aaagcttttg ccttgatga aagtccatat ggtgtccgag tcaactgtat 650  
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 ggccgcatgg gccagcccg ctaggtcggg gctgcggcag tgttcctggc 800  
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 cccgatatcc cttcctgatt tctctcattt ctacttgggg ccccttct 950  
 aggactctcc caccctaaac tccaacctgt atcagatgca gcccccaagc 1000  
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 ccataaaaaac gatttgcagc c 1071

<210> 468

<211> 270

<212> PRT

<213> Homo sapiens

<400> 468

Met	Ala	Thr	Gly	Thr	Arg	Tyr	Ala	Gly	Lys	Val	Val	Val	Val	Thr
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				20					25					30
Asn	Ser	Gly	Ala	Arg	Val	Val	Ile	Cys	Asp	Lys	Asp	Glu	Ser	Gly
				35					40					45
Gly	Arg	Ala	Leu	Glu	Gln	Glu	Leu	Pro	Gly	Ala	Val	Phe	Ile	Leu
				50					55					60
Cys	Asp	Val	Thr	Gln	Glu	Asp	Asp	Val	Lys	Thr	Leu	Val	Ser	Glu
				65					70					75
Thr	Ile	Arg	Arg	Phe	Gly	Arg	Leu	Asp	Cys	Val	Val	Asn	Asn	Ala
				80					85					90
Gly	His	His	Pro	Pro	Pro	Gln	Arg	Pro	Glu	Glu	Thr	Ser	Ala	Gln
				95					100					105
Gly	Phe	Arg	Gln	Leu	Leu	Glu	Leu	Asn	Leu	Leu	Gly	Thr	Tyr	Thr
				110					115					120

Leu	Thr	Lys	Leu	Ala	Leu	Pro	Tyr	Leu	Arg	Lys	Ser	Gln	Gly	Asn	
				125					130					135	
Val	Ile	Asn	Ile	Ser	Ser	Leu	Val	Gly	Ala	Ile	Gly	Gln	Ala	Gln	
				140					145					150	
Ala	Val	Pro	Tyr	Val	Ala	Thr	Lys	Gly	Ala	Val	Thr	Ala	Met	Thr	
				155					160					165	
Lys	Ala	Leu	Ala	Leu	Asp	Glu	Ser	Pro	Tyr	Gly	Val	Arg	Val	Asn	
				170					175					180	
Cys	Ile	Ser	Pro	Gly	Asn	Ile	Trp	Thr	Pro	Leu	Trp	Glu	Glu	Leu	
				185					190					195	
Ala	Ala	Leu	Met	Pro	Asp	Pro	Arg	Ala	Thr	Ile	Arg	Glu	Gly	Met	
				200					205					210	
Leu	Ala	Gln	Pro	Leu	Gly	Arg	Met	Gly	Gln	Pro	Ala	Glu	Val	Gly	
				215					220					225	
Ala	Ala	Ala	Val	Phe	Leu	Ala	Ser	Glu	Ala	Asn	Phe	Cys	Thr	Gly	
				230					235					240	
Ile	Glu	Leu	Leu	Val	Thr	Gly	Gly	Ala	Glu	Leu	Gly	Tyr	Gly	Cys	
				245					250					255	
Lys	Ala	Ser	Arg	Ser	Thr	Pro	Val	Asp	Ala	Pro	Asp	Ile	Pro	Ser	
				260					265					270	

<210> 469  
 <211> 687  
 <212> DNA  
 <213> Homo sapiens

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 ccagcccagg agccccaaaa gcaagaggaa ggggcaaggg cggcctgggc 150  
 ccctggcccc tggccctcac caggtgccac tggacctggt gtcacggatg 200  
 aaaccgtatg cccgcatgga ggagtatgag aggaacatcg aggagatggt 250  
 ggcccagctg aggaacagct cagagctggc ccagagaaag tgtgaggtca 300  
 acttgcagct gtggatgtcc aacaagagga gcctgtctcc ctggggctac 350  
 agcatcaacc acgaccccag ccgtatcccc gtggacctgc cggaggcacg 400  
 gtgcctgtgt ctgggctgtg tgaacccctt caccatgcag gaggaccgca 450  
 gcatggtgag cgtgccggtg ttcagccagg ttctgtgcg ccgccgctc 500  
 tgcccgcac cgccccgcac agggccttgc cgccagcgcg cagtcatgga 550



gaccatcgct gtgggctgca cctgcatctt ctgaatcacc tggcccagaa 600  
gccaggccag cagcccagaga ccatacctcct tgcacctttg tgccaagaaa 650  
ggcctatgaa aagtaaacac tgacttttga aagcaag 687

<210> 470  
<211> 180  
<212> PRT  
<213> Homo sapiens

<400> 470  
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20 25 30  
Gly Gln Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val  
35 40 45  
Pro Leu Asp Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu  
50 55 60  
Glu Tyr Glu Arg Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn  
65 70 75  
Ser Ser Glu Leu Ala Gln Arg Lys Cys Glu Val Asn Leu Gln Leu  
80 85 90  
Trp Met Ser Asn Lys Arg Ser Leu Ser Pro Trp Gly Tyr Ser Ile  
95 100 105  
Asn His Asp Pro Ser Arg Ile Pro Val Asp Leu Pro Glu Ala Arg  
110 115 120  
Cys Leu Cys Leu Gly Cys Val Asn Pro Phe Thr Met Gln Glu Asp  
125 130 135  
Arg Ser Met Val Ser Val Pro Val Phe Ser Gln Val Pro Val Arg  
140 145 150  
Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr Gly Pro Cys Arg Gln  
155 160 165  
Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys Thr Cys Ile Phe  
170 175 180

<210> 471  
<211> 2368  
<212> DNA  
<213> Homo sapiens

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ctccccgccg agaagcctcg ctcggcgccc aacatggcgg gtgggcgctg 150  
cgccccgcag ctaacggcgc tcctggccgc ctggatcgcg gctgtggcgg 200  
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aatgggaggc ttttgcaaag aatggtgaaa tacttcagat cagtgtgggg 400  
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cactctccca gcattttttc atgcaaagga tgggatattc cgccgttata 500  
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 taaccataac ccctgaagct gtgactgcc aacatctcaa atgaaatgtt 1950  
 gtggccatca gagactcaaa aggaagtaag gattttacaa gacagattaa 2000  
 aaaaaaattg ttttgtccaa aatatagttg ttgttgattt ttttttaagt 2050  
 tttctaagca atatttttca agccagaagt cctctaagtc ttgccagtac 2100  
 aaggtagtct tgtgaagaaa agttgaatac tgttttgttt tcatctcaag 2150  
 gggttccctg ggtcttgaac tactttaata ataactaaaa aaccacttct 2200  
 gattttcctt cagtgatgtg cttttggtga aagaattaat gaactccagt 2250  
 acctgaaagt gaaagatttg attttgtttc catcttctgt aatcttccaa 2300  
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<210> 472

<211> 349

<212> PRT

<213> Homo sapiens

<400> 472

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			20						25					30
Ala	Leu	Pro	Pro	Glu	Gln	Ser	Arg	Val	Gln	Pro	Met	Thr	Ala	Ser
			35						40					45
Asn	Trp	Thr	Leu	Val	Met	Glu	Gly	Glu	Trp	Met	Leu	Lys	Phe	Tyr
			50						55					60
Ala	Pro	Trp	Cys	Pro	Ser	Cys	Gln	Gln	Thr	Asp	Ser	Glu	Trp	Glu
			65						70					75
Ala	Phe	Ala	Lys	Asn	Gly	Glu	Ile	Leu	Gln	Ile	Ser	Val	Gly	Lys
			80						85					90

Val	Asp	Val	Ile	Gln	Glu	Pro	Gly	Leu	Ser	Gly	Arg	Phe	Phe	Val	95	100	105
Thr	Thr	Leu	Pro	Ala	Phe	Phe	His	Ala	Lys	Asp	Gly	Ile	Phe	Arg	110	115	120
Arg	Tyr	Arg	Gly	Pro	Gly	Ile	Phe	Glu	Asp	Leu	Gln	Asn	Tyr	Ile	125	130	135
Leu	Glu	Lys	Lys	Trp	Gln	Ser	Val	Glu	Pro	Leu	Thr	Gly	Trp	Lys	140	145	150
Ser	Pro	Ala	Ser	Leu	Thr	Met	Ser	Gly	Met	Ala	Gly	Leu	Phe	Ser	155	160	165
Ile	Ser	Gly	Lys	Ile	Trp	His	Leu	His	Asn	Tyr	Phe	Thr	Val	Thr	170	175	180
Leu	Gly	Ile	Pro	Ala	Trp	Cys	Ser	Tyr	Val	Phe	Phe	Val	Ile	Ala	185	190	195
Thr	Leu	Val	Phe	Gly	Leu	Phe	Met	Gly	Leu	Val	Leu	Val	Val	Ile	200	205	210
Ser	Glu	Cys	Phe	Tyr	Val	Pro	Leu	Pro	Arg	His	Leu	Ser	Glu	Arg	215	220	225
Ser	Glu	Gln	Asn	Arg	Arg	Ser	Glu	Glu	Ala	His	Arg	Ala	Glu	Gln	230	235	240
Leu	Gln	Asp	Ala	Glu	Glu	Glu	Lys	Asp	Asp	Ser	Asn	Glu	Glu	Glu	245	250	255
Asn	Lys	Asp	Ser	Leu	Val	Asp	Asp	Glu	Glu	Glu	Lys	Glu	Asp	Leu	260	265	270
Gly	Asp	Glu	Asp	Glu	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asn	Leu	275	280	285
Ala	Ala	Gly	Val	Asp	Glu	Glu	Arg	Ser	Glu	Ala	Asn	Asp	Gln	Gly	290	295	300
Pro	Pro	Gly	Glu	Asp	Gly	Val	Thr	Arg	Glu	Glu	Val	Glu	Pro	Glu	305	310	315
Glu	Ala	Glu	Glu	Gly	Ile	Ser	Glu	Gln	Pro	Cys	Pro	Ala	Asp	Thr	320	325	330
Glu	Val	Val	Glu	Asp	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Gln	His	Ala	335	340	345

Asp Lys Gly Leu

<210> 473

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 473  
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<210> 474  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 474  
ctctcctcat ccacaccagc agcc 24

<210> 475  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 475  
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<210> 476  
<211> 2478  
<212> DNA  
<213> Homo sapiens

<400> 476  
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gccacatga tttgactcag agattctctt ttgtccacag acagtcattct 100  
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tcaagaacaa tggaatatca tctgatttta gaaaatttgg atgaagatgg 200  
atatactcaa ttacacttcg actctcaaag caataccagg atagctgttg 250  
tttcagagaa aggatcgtgt gctgcattct ctccttggcg cctcattgct 300  
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agtaaaagac aatgctggca actgggctct aatctcctaa agatagacag 500  
ctcaaataaa ttgggattta tagtaaaaca agtgtcttcc caacctgata 550  
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<210> 477  
 <211> 201  
 <212> PRT  
 <213> Homo sapiens

<400> 477  
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 Val Ser Glu Lys Gly Ser Cys Ala Ala Ser Pro Pro Trp Arg Leu  
 35 40 45  
 Ile Ala Val Ile Leu Gly Ile Leu Cys Leu Val Ile Leu Val Ile  
 50 55 60  
 Ala Val Val Leu Gly Thr Met Gly Val Leu Ser Ser Pro Cys Pro  
 65 70 75  
 Pro Asn Trp Ile Ile Tyr Glu Lys Ser Cys Tyr Leu Phe Ser Met  
 80 85 90  
 Ser Leu Asn Ser Trp Asp Gly Ser Lys Arg Gln Cys Trp Gln Leu  
 95 100 105  
 Gly Ser Asn Leu Leu Lys Ile Asp Ser Ser Asn Glu Leu Gly Phe  
 110 115 120  
 Ile Val Lys Gln Val Ser Ser Gln Pro Asp Asn Ser Phe Trp Ile  
 125 130 135  
 Gly Leu Ser Arg Pro Gln Thr Glu Val Pro Trp Leu Trp Glu Asp  
 140 145 150  
 Gly Ser Thr Phe Ser Ser Asn Leu Phe Gln Ile Arg Thr Thr Ala  
 155 160 165  
 Thr Gln Glu Asn Pro Ser Pro Asn Cys Val Trp Ile His Val Ser

170

175

180

Val Ile Tyr Asp Gln Leu Cys Ser Val Pro Ser Tyr Ser Ile Cys  
 185 190 195

Glu Lys Lys Phe Ser Met  
 200

&lt;210&gt; 478

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 478

gtccacagac agtcattctca ggagcag 27

&lt;210&gt; 479

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 479

acaagtgtct tcccaacctg 20

&lt;210&gt; 480

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 480

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&lt;210&gt; 481

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 481

ccaaggatag ctgttggttc agagaaagga tcgtgtgctg catctcctcc 50

t 51

&lt;210&gt; 482

&lt;211&gt; 3819

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



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tggggattgt ggtacagaac accaaagtag ccaacctcac ggagcccgtg 1200  
gtgctcactt tccagacca gctacagccg aagaatgtga ctctgcaatg 1250  
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 <212> PRT  
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 Asp Phe Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser  
 35 40 45  
 Leu His Tyr Lys Pro Thr Pro Asp Leu Arg Ile Ser Ile Glu Asn  
 50 55 60  
 Ser Glu Glu Ala Leu Thr Val His Ala Pro Phe Pro Ala Ala His  
 65 70 75

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Cys	Leu	Tyr	Trp	Asn	Arg	His	Ala	Gly	Arg	Leu	His	Leu	Leu	Tyr	
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Gly	Lys	Arg	Asp	Phe	Leu	Leu	Ser	Asp	Lys	Ala	Ser	Ser	Leu	Leu	
				110					115					120	
Cys	Phe	Gln	His	Gln	Glu	Glu	Ser	Leu	Ala	Gln	Gly	Pro	Pro	Leu	
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Leu	Ala	Thr	Ser	Val	Thr	Ser	Trp	Trp	Ser	Pro	Gln	Asn	Ile	Ser	
				140					145					150	
Leu	Pro	Ser	Ala	Ala	Ser	Phe	Thr	Phe	Ser	Phe	His	Ser	Pro	Pro	
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His	Thr	Ala	Ala	His	Asn	Ala	Ser	Val	Asp	Met	Cys	Glu	Leu	Lys	
				170					175					180	
Arg	Asp	Leu	Gln	Leu	Leu	Ser	Gln	Phe	Leu	Lys	His	Pro	Gln	Lys	
				185					190					195	
Ala	Ser	Arg	Arg	Pro	Ser	Ala	Ala	Pro	Ala	Ser	Gln	Gln	Leu	Gln	
				200					205					210	
Ser	Leu	Glu	Ser	Lys	Leu	Thr	Ser	Val	Arg	Phe	Met	Gly	Asp	Met	
				215					220					225	
Val	Ser	Phe	Glu	Glu	Asp	Arg	Ile	Asn	Ala	Thr	Val	Trp	Lys	Leu	
				230					235					240	
Gln	Pro	Thr	Ala	Gly	Leu	Gln	Asp	Leu	His	Ile	His	Ser	Arg	Gln	
				245					250					255	
Glu	Glu	Glu	Gln	Ser	Glu	Ile	Met	Glu	Tyr	Ser	Val	Leu	Leu	Pro	
				260					265					270	
Arg	Thr	Leu	Phe	Gln	Arg	Thr	Lys	Gly	Arg	Ser	Gly	Glu	Ala	Glu	
				275					280					285	
Lys	Arg	Leu	Leu	Leu	Val	Asp	Phe	Ser	Ser	Gln	Ala	Leu	Phe	Gln	
				290					295					300	
Asp	Lys	Asn	Ser	Ser	Gln	Val	Leu	Gly	Glu	Lys	Val	Leu	Gly	Ile	
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Leu	Thr	Phe	Gln	His	Gln	Leu	Gln	Pro	Lys	Asn	Val	Thr	Leu	Gln	
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Cys	Val	Phe	Trp	Val	Glu	Asp	Pro	Thr	Leu	Ser	Ser	Pro	Gly	His	
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Trp	Ser	Ser	Ala	Gly	Cys	Glu	Thr	Val	Arg	Arg	Glu	Thr	Gln	Thr	

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Ser	Ser	Val	Glu	Val	Asp	Ala	Val	His	Lys	His	Tyr	Leu	Ser	Leu					
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Leu	Ser	Tyr	Val	Gly	Cys	Val	Val	Ser	Ala	Leu	Ala	Cys	Leu	Val					
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Thr	Ile	Ala	Ala	Tyr	Leu	Cys	Ser	Arg	Val	Pro	Leu	Pro	Cys	Arg					
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Arg	Lys	Pro	Arg	Asp	Tyr	Thr	Ile	Lys	Val	His	Met	Asn	Leu	Leu					
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Val	Ala	Leu	Thr	Gly	Ser	Glu	Ala	Gly	Cys	Arg	Ala	Ser	Ala	Ile					
				470					475					480					
Phe	Leu	His	Phe	Ser	Leu	Leu	Thr	Cys	Leu	Ser	Trp	Met	Gly	Leu					
				485					490					495					
Glu	Gly	Tyr	Asn	Leu	Tyr	Arg	Leu	Val	Val	Glu	Val	Phe	Gly	Thr					
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Tyr	Val	Pro	Gly	Tyr	Leu	Leu	Lys	Leu	Ser	Ala	Met	Gly	Trp	Gly					
				515					520					525					
Phe	Pro	Ile	Phe	Leu	Val	Thr	Leu	Val	Ala	Leu	Val	Asp	Val	Asp					
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				545					550					555					
Val	Ile	Tyr	Pro	Ser	Met	Cys	Trp	Ile	Arg	Asp	Ser	Leu	Val	Ser					
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				590					595					600					
Pro	His	Thr	Gln	Lys	Trp	Ser	His	Val	Leu	Thr	Leu	Leu	Gly	Leu					
				605					610					615					
Ser	Leu	Val	Leu	Gly	Leu	Pro	Trp	Ala	Leu	Ile	Phe	Phe	Ser	Phe					
				620					625					630					
Ala	Ser	Gly	Thr	Phe	Gln	Leu	Val	Val	Leu	Tyr	Leu	Phe	Ser	Ile					
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Ile	Thr	Ser	Phe	Gln	Gly	Phe	Leu	Ile	Phe	Ile	Trp	Tyr	Trp	Ser					
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680 685 690

Ser Arg Ile

<210> 484  
<211> 516  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 68, 70, 84, 147  
<223> unknown base

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<210> 485  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 485  
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<210> 486  
<211> 24  
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<220>

<223> Synthetic oligonucleotide probe

<400> 486

tggaggccta gatgcggctg gacg 24

<210> 487

<211> 2849

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 2715

<223> unknown base

<400> 487

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aagagggctc taggaaaaag ttttgatgg gattatgtgg aaactaccct 150

gagattctct gctgccagag caggctcggc gcttccaccc cagtgcagcc 200

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ccgccgtgag tgagctctca cccagtcag ccaaagagc ctcttcgggc 300

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gaatccaacc tgagtagtaa attccagttt tccagcaaca aggaacagaa 400

cggagtacaa gacctcagc atgagagaat tattactgtg tctactaatg 450

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<210> 488

<211> 345

<212> PRT

<213> Homo sapiens

<400> 488

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Gln	Phe	Ser	Ser	Asn	Lys	Glu	Gln	Asn	Gly	Val	Gln	Asp	Pro	Gln	35	40	45	
His	Glu	Arg	Ile	Ile	Thr	Val	Ser	Thr	Asn	Gly	Ser	Ile	His	Ser	50	55	60	
Pro	Arg	Phe	Pro	His	Thr	Tyr	Pro	Arg	Asn	Thr	Val	Leu	Val	Trp	65	70	75	
Arg	Leu	Val	Ala	Val	Glu	Glu	Asn	Val	Trp	Ile	Gln	Leu	Thr	Phe	80	85	90	
Asp	Glu	Arg	Phe	Gly	Leu	Glu	Asp	Pro	Glu	Asp	Asp	Ile	Cys	Lys	95	100	105	
Tyr	Asp	Phe	Val	Glu	Val	Glu	Glu	Pro	Ser	Asp	Gly	Thr	Ile	Leu	110	115	120	
Gly	Arg	Trp	Cys	Gly	Ser	Gly	Thr	Val	Pro	Gly	Lys	Gln	Ile	Ser	125	130	135	
Lys	Gly	Asn	Gln	Ile	Arg	Ile	Arg	Phe	Val	Ser	Asp	Glu	Tyr	Phe	140	145	150	
Pro	Ser	Glu	Pro	Gly	Phe	Cys	Ile	His	Tyr	Asn	Ile	Val	Met	Pro	155	160	165	
Gln	Phe	Thr	Glu	Ala	Val	Ser	Pro	Ser	Val	Leu	Pro	Pro	Ser	Ala	170	175	180	
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Asp	Leu	Glu	Asp	Leu	Tyr	Arg	Pro	Thr	Trp	Gln	Leu	Leu	Gly	Lys	215	220	225
Ala	Phe	Val	Phe	Gly	Arg	Lys	Ser	Arg	Val	Val	Asp	Leu	Asn	Leu	230	235	240
Leu	Thr	Glu	Glu	Val	Arg	Leu	Tyr	Ser	Cys	Thr	Pro	Arg	Asn	Phe	245	250	255
Ser	Val	Ser	Ile	Arg	Glu	Glu	Leu	Lys	Arg	Thr	Asp	Thr	Ile	Phe	260	265	270
Trp	Pro	Gly	Cys	Leu	Leu	Val	Lys	Arg	Cys	Gly	Gly	Asn	Cys	Ala	275	280	285
Cys	Cys	Leu	His	Asn	Cys	Asn	Glu	Cys	Gln	Cys	Val	Pro	Ser	Lys	290	295	300
Val	Thr	Lys	Lys	Tyr	His	Glu	Val	Leu	Gln	Leu	Arg	Pro	Lys	Thr	305	310	315
Gly	Val	Arg	Gly	Leu	His	Lys	Ser	Leu	Thr	Asp	Val	Ala	Leu	Glu	320	325	330
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<210> 489

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 490

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 490

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<210> 491

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 491  
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<210> 492

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 492  
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<210> 493

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 493  
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<210> 494

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

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<210> 495

<211> 3283

<212> DNA

<213> Homo sapiens

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<210> 496

<211> 1049

<212> PRT

<213> Homo sapiens

<400> 496

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				20					25					30	
Pro	Lys	Thr	Leu	Pro	Cys	Asp	Val	Thr	Leu	Asp	Val	Pro	Lys	Asn	
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His	Val	Ile	Val	Asp	Cys	Thr	Asp	Lys	His	Leu	Thr	Glu	Ile	Pro	
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Gly	Gly	Ile	Pro	Thr	Asn	Thr	Thr	Asn	Leu	Thr	Leu	Thr	Ile	Asn	
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His	Ile	Pro	Asp	Ile	Ser	Pro	Ala	Ser	Phe	His	Arg	Leu	Asp	His	
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Leu	Val	Glu	Ile	Asp	Phe	Arg	Cys	Asn	Cys	Val	Pro	Ile	Pro	Leu	
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Gly	Ser	Lys	Asn	Asn	Met	Cys	Ile	Lys	Arg	Leu	Gln	Ile	Lys	Pro	
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Arg	Ser	Phe	Ser	Gly	Leu	Thr	Tyr	Leu	Lys	Ser	Leu	Tyr	Leu	Asp	
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Gly	Asn	Gln	Leu	Leu	Glu	Ile	Pro	Gln	Gly	Leu	Pro	Pro	Ser	Leu	
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Gln	Leu	Leu	Ser	Leu	Glu	Ala	Asn	Asn	Ile	Phe	Ser	Ile	Arg	Lys	
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Glu	Asn	Leu	Thr	Glu	Leu	Ala	Asn	Ile	Glu	Ile	Leu	Tyr	Leu	Gly	
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Gln	Asn	Cys	Tyr	Tyr	Arg	Asn	Pro	Cys	Tyr	Val	Ser	Tyr	Ser	Ile	
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Glu	Lys	Asp	Ala	Phe	Leu	Asn	Leu	Thr	Lys	Leu	Lys	Val	Leu	Ser	
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Leu	Lys	Asp	Asn	Asn	Val	Thr	Ala	Val	Pro	Thr	Val	Leu	Pro	Ser	
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Thr	Leu	Thr	Glu	Leu	Tyr	Leu	Tyr	Asn	Asn	Met	Ile	Ala	Lys	Ile	
				230					235					240	
Gln	Glu	Asp	Asp	Phe	Asn	Asn	Leu	Asn	Gln	Leu	Gln	Ile	Leu	Asp	
				245					250					255	

Leu Ser Gly Asn Cys Pro Arg Cys Tyr Asn Ala Pro Phe Pro Cys	260	265	270
Ala Pro Cys Lys Asn Asn Ser Pro Leu Gln Ile Pro Val Asn Ala	275	280	285
Phe Asp Ala Leu Thr Glu Leu Lys Val Leu Arg Leu His Ser Asn	290	295	300
Ser Leu Gln His Val Pro Pro Arg Trp Phe Lys Asn Ile Asn Lys	305	310	315
Leu Gln Glu Leu Asp Leu Ser Gln Asn Phe Leu Ala Lys Glu Ile	320	325	330
Gly Asp Ala Lys Phe Leu His Phe Leu Pro Ser Leu Ile Gln Leu	335	340	345
Asp Leu Ser Phe Asn Phe Glu Leu Gln Val Tyr Arg Ala Ser Met	350	355	360
Asn Leu Ser Gln Ala Phe Ser Ser Leu Lys Ser Leu Lys Ile Leu	365	370	375
Arg Ile Arg Gly Tyr Val Phe Lys Glu Leu Lys Ser Phe Asn Leu	380	385	390
Ser Pro Leu His Asn Leu Gln Asn Leu Glu Val Leu Asp Leu Gly	395	400	405
Thr Asn Phe Ile Lys Ile Ala Asn Leu Ser Met Phe Lys Gln Phe	410	415	420
Lys Arg Leu Lys Val Ile Asp Leu Ser Val Asn Lys Ile Ser Pro	425	430	435
Ser Gly Asp Ser Ser Glu Val Gly Phe Cys Ser Asn Ala Arg Thr	440	445	450
Ser Val Glu Ser Tyr Glu Pro Gln Val Leu Glu Gln Leu His Tyr	455	460	465
Phe Arg Tyr Asp Lys Tyr Ala Arg Ser Cys Arg Phe Lys Asn Lys	470	475	480
Glu Ala Ser Phe Met Ser Val Asn Glu Ser Cys Tyr Lys Tyr Gly	485	490	495
Gln Thr Leu Asp Leu Ser Lys Asn Ser Ile Phe Phe Val Lys Ser	500	505	510
Ser Asp Phe Gln His Leu Ser Phe Leu Lys Cys Leu Asn Leu Ser	515	520	525
Gly Asn Leu Ile Ser Gln Thr Leu Asn Gly Ser Glu Phe Gln Pro	530	535	540
Leu Ala Glu Leu Arg Tyr Leu Asp Phe Ser Asn Asn Arg Leu Asp			

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Leu	Leu	His	Ser	Thr	Ala	Phe	Glu	Glu	Leu	His	Lys	Leu	Glu	Val					
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Leu	Asp	Ile	Ser	Ser	Asn	Ser	His	Tyr	Phe	Gln	Ser	Glu	Gly	Ile					
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Thr	His	Met	Leu	Asn	Phe	Thr	Lys	Asn	Leu	Lys	Val	Leu	Gln	Lys					
				590					595					600					
Leu	Met	Met	Asn	Asp	Asn	Asp	Ile	Ser	Ser	Ser	Thr	Ser	Arg	Thr					
				605					610					615					
Met	Glu	Ser	Glu	Ser	Leu	Arg	Thr	Leu	Glu	Phe	Arg	Gly	Asn	His					
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Leu	Asp	Val	Leu	Trp	Arg	Glu	Gly	Asp	Asn	Arg	Tyr	Leu	Gln	Leu					
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Phe	Lys	Asn	Leu	Leu	Lys	Leu	Glu	Glu	Leu	Asp	Ile	Ser	Lys	Asn					
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Asn	Leu	Lys	Asn	Leu	Ser	Leu	Ala	Lys	Asn	Gly	Leu	Lys	Ser	Phe					
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Ser	Trp	Lys	Lys	Leu	Gln	Cys	Leu	Lys	Asn	Leu	Glu	Thr	Leu	Asp					
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Ile	Ser	Leu	Asp	Leu	Tyr	Thr	Cys	Glu	Leu	Asp	Leu	Thr	Asn	Leu					
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Ile Leu Phe Ser	Leu Ser Ile Ser Val	Ser Leu Phe Leu Met	Val
845		850	855
Met Met Thr Ala	Ser His Leu Tyr Phe	Trp Asp Val Trp Tyr	Ile
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Tyr His Phe Cys	Lys Ala Lys Ile Lys	Gly Tyr Gln Arg Leu	Ile
875		880	885
Ser Pro Asp Cys	Cys Tyr Asp Ala Phe	Ile Val Tyr Asp Thr	Lys
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Asp Pro Ala Val	Thr Glu Trp Val Leu	Ala Glu Leu Val Ala	Lys
905		910	915
Leu Glu Asp Pro	Arg Glu Lys His Phe	Asn Leu Cys Leu Glu	Glu
920		925	930
Arg Asp Trp Leu	Pro Gly Gln Pro Val	Leu Glu Asn Leu Ser	Gln
935		940	945
Ser Ile Gln Leu	Ser Lys Lys Thr Val	Phe Val Met Thr Asp	Lys
950		955	960
Tyr Ala Lys Thr	Glu Asn Phe Lys Ile	Ala Phe Tyr Leu Ser	His
965		970	975
Gln Arg Leu Met	Asp Glu Lys Val Asp	Val Ile Ile Leu Ile	Phe
980		985	990
Leu Glu Lys Pro	Phe Gln Lys Ser Lys	Phe Leu Gln Leu Arg	Lys
995		1000	1005
Arg Leu Cys Gly	Ser Ser Val Leu Glu	Trp Pro Thr Asn Pro	Gln
1010		1015	1020
Ala His Pro Tyr	Phe Trp Gln Cys Leu	Lys Asn Ala Leu Ala	Thr
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<210> 497

<211> 4199

<212> DNA

<213> Homo sapiens

<400> 497

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<211> 1041

<212> PRT

<213> Homo sapiens

<400> 498

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Ile Ala Glu Cys Ser Asn Arg Arg Leu Gln Glu Val Pro Gln Thr

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Asn	Pro	Gly	Ile	Gln	Ser	Asn	Gly	Leu	Asn	Ile	Thr	Asp	Gly	Ala
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Phe	Leu	Asn	Leu	Lys	Asn	Leu	Arg	Glu	Leu	Leu	Leu	Glu	Asp	Asn
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Val	Phe	Glu	Thr	Leu	Thr	Asn	Leu	Glu	Leu	Leu	Ser	Leu	Ser	Phe
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Asn	Ser	Leu	Ser	His	Val	Pro	Pro	Lys	Leu	Pro	Ser	Ser	Leu	Arg
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Lys	Leu	Phe	Leu	Ser	Asn	Thr	Gln	Ile	Lys	Tyr	Ile	Ser	Glu	Glu
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Lys	Ile	Asn	Ala	Ala	Trp	Phe	Lys	Asn	Met	Pro	His	Leu	Lys	Val
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Leu	Asp	Leu	Glu	Phe	Asn	Tyr	Leu	Val	Gly	Glu	Ile	Val	Ser	Gly
				320					325					330
Ala	Phe	Leu	Thr	Met	Leu	Pro	Arg	Leu	Glu	Ile	Leu	Asp	Leu	Ser
				335					340					345

Phe	Asn	Tyr	Ile	Lys	Gly	Ser	Tyr	Pro	Gln	His	Ile	Asn	Ile	Ser	350	355	360
Arg	Asn	Phe	Ser	Lys	Leu	Leu	Ser	Leu	Arg	Ala	Leu	His	Leu	Arg	365	370	375
Gly	Tyr	Val	Phe	Gln	Glu	Leu	Arg	Glu	Asp	Asp	Phe	Gln	Pro	Leu	380	385	390
Met	Gln	Leu	Pro	Asn	Leu	Ser	Thr	Ile	Asn	Leu	Gly	Ile	Asn	Phe	395	400	405
Ile	Lys	Gln	Ile	Asp	Phe	Lys	Leu	Phe	Gln	Asn	Phe	Ser	Asn	Leu	410	415	420
Glu	Ile	Ile	Tyr	Leu	Ser	Glu	Asn	Arg	Ile	Ser	Pro	Leu	Val	Lys	425	430	435
Asp	Thr	Arg	Gln	Ser	Tyr	Ala	Asn	Ser	Ser	Ser	Phe	Gln	Arg	His	440	445	450
Ile	Arg	Lys	Arg	Arg	Ser	Thr	Asp	Phe	Glu	Phe	Asp	Pro	His	Ser	455	460	465
Asn	Phe	Tyr	His	Phe	Thr	Arg	Pro	Leu	Ile	Lys	Pro	Gln	Cys	Ala	470	475	480
Ala	Tyr	Gly	Lys	Ala	Leu	Asp	Leu	Ser	Leu	Asn	Ser	Ile	Phe	Phe	485	490	495
Ile	Gly	Pro	Asn	Gln	Phe	Glu	Asn	Leu	Pro	Asp	Ile	Ala	Cys	Leu	500	505	510
Asn	Leu	Ser	Ala	Asn	Ser	Asn	Ala	Gln	Val	Leu	Ser	Gly	Thr	Glu	515	520	525
Phe	Ser	Ala	Ile	Pro	His	Val	Lys	Tyr	Leu	Asp	Leu	Thr	Asn	Asn	530	535	540
Arg	Leu	Asp	Phe	Asp	Asn	Ala	Ser	Ala	Leu	Thr	Glu	Leu	Ser	Asp	545	550	555
Leu	Glu	Val	Leu	Asp	Leu	Ser	Tyr	Asn	Ser	His	Tyr	Phe	Arg	Ile	560	565	570
Ala	Gly	Val	Thr	His	His	Leu	Glu	Phe	Ile	Gln	Asn	Phe	Thr	Asn	575	580	585
Leu	Lys	Val	Leu	Asn	Leu	Ser	His	Asn	Asn	Ile	Tyr	Thr	Leu	Thr	590	595	600
Asp	Lys	Tyr	Asn	Leu	Glu	Ser	Lys	Ser	Leu	Val	Glu	Leu	Val	Phe	605	610	615
Ser	Gly	Asn	Arg	Leu	Asp	Ile	Leu	Trp	Asn	Asp	Asp	Asp	Asn	Arg	620	625	630
Tyr	Ile	Ser	Ile	Phe	Lys	Gly	Leu	Lys	Asn	Leu	Thr	Arg	Leu	Asp			

635					640					645				
Leu	Ser	Leu	Asn	Arg	Leu	Lys	His	Ile	Pro	Asn	Glu	Ala	Phe	Leu
				650					655					660
Asn	Leu	Pro	Ala	Ser	Leu	Thr	Glu	Leu	His	Ile	Asn	Asp	Asn	Met
				665					670					675
Leu	Lys	Phe	Phe	Asn	Trp	Thr	Leu	Leu	Gln	Gln	Phe	Pro	Arg	Leu
				680					685					690
Glu	Leu	Leu	Asp	Leu	Arg	Gly	Asn	Lys	Leu	Leu	Phe	Leu	Thr	Asp
				695					700					705
Ser	Leu	Ser	Asp	Phe	Thr	Ser	Ser	Leu	Arg	Thr	Leu	Leu	Leu	Ser
				710					715					720
His	Asn	Arg	Ile	Ser	His	Leu	Pro	Ser	Gly	Phe	Leu	Ser	Glu	Val
				725					730					735
Ser	Ser	Leu	Lys	His	Leu	Asp	Leu	Ser	Ser	Asn	Leu	Leu	Lys	Thr
				740					745					750
Ile	Asn	Lys	Ser	Ala	Leu	Glu	Thr	Lys	Thr	Thr	Thr	Lys	Leu	Ser
				755					760					765
Met	Leu	Glu	Leu	His	Gly	Asn	Pro	Phe	Glu	Cys	Thr	Cys	Asp	Ile
				770					775					780
Gly	Asp	Phe	Arg	Arg	Trp	Met	Asp	Glu	His	Leu	Asn	Val	Lys	Ile
				785					790					795
Pro	Arg	Leu	Val	Asp	Val	Ile	Cys	Ala	Ser	Pro	Gly	Asp	Gln	Arg
				800					805					810
Gly	Lys	Ser	Ile	Val	Ser	Leu	Glu	Leu	Thr	Thr	Cys	Val	Ser	Asp
				815					820					825
Val	Thr	Ala	Val	Ile	Leu	Phe	Phe	Phe	Thr	Phe	Phe	Ile	Thr	Thr
				830					835					840
Met	Val	Met	Leu	Ala	Ala	Leu	Ala	His	His	Leu	Phe	Tyr	Trp	Asp
				845					850					855
Val	Trp	Phe	Ile	Tyr	Asn	Val	Cys	Leu	Ala	Lys	Val	Lys	Gly	Tyr
				860					865					870
Arg	Ser	Leu	Ser	Thr	Ser	Gln	Thr	Phe	Tyr	Asp	Ala	Tyr	Ile	Ser
				875					880					885
Tyr	Asp	Thr	Lys	Asp	Ala	Ser	Val	Thr	Asp	Trp	Val	Ile	Asn	Glu
				890					895					900
Leu	Arg	Tyr	His	Leu	Glu	Glu	Ser	Arg	Asp	Lys	Asn	Val	Leu	Leu
				905					910					915
Cys	Leu	Glu	Glu	Arg	Asp	Trp	Asp	Pro	Gly	Leu	Ala	Ile	Ile	Asp
				920					925					930

Asn	Leu	Met	Gln	Ser	Ile	Asn	Gln	Ser	Lys	Lys	Thr	Val	Phe	Val	
			935							940				945	
Leu	Thr	Lys	Lys	Tyr	Ala	Lys	Ser	Trp	Asn	Phe	Lys	Thr	Ala	Phe	
			950							955				960	
Tyr	Leu	Ala	Leu	Gln	Arg	Leu	Met	Asp	Glu	Asn	Met	Asp	Val	Ile	
			965							970				975	
Ile	Phe	Ile	Leu	Leu	Glu	Pro	Val	Leu	Gln	His	Ser	Gln	Tyr	Leu	
			980							985				990	
Arg	Leu	Arg	Gln	Arg	Ile	Cys	Lys	Ser	Ser	Ile	Leu	Gln	Trp	Pro	
			995							1000				1005	
Asp	Asn	Pro	Lys	Ala	Glu	Gly	Leu	Phe	Trp	Gln	Thr	Leu	Arg	Asn	
			1010							1015				1020	
Val	Val	Leu	Thr	Glu	Asn	Asp	Ser	Arg	Tyr	Asn	Asn	Met	Tyr	Val	
			1025							1030				1035	
Asp	Ser	Ile	Lys	Gln	Tyr										
			1040												

<210> 499  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 499  
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<210> 500  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 500  
 atccatgagc ctctgatggg 20

<210> 501  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 501  
 atttatgtct cgaggaaagg gactgggttac cagggcagcc agttc 45

<210> 502



<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 502  
gccgagacaa aaacgttctc c 21

<210> 503  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 503  
catccatggt ctcattcatt agcc 24

<210> 504  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 504  
tcgacaacct catgcagagc atcaaccaa gcaagaaaac agtatt 46

<210> 505  
<211> 1738  
<212> DNA  
<213> Homo sapiens

<400> 505  
ccaggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatcct 50  
ctagagatcc ctgcacctcg acccaccggt ccgccaagct ggccctgcac 100  
ggctgcaagg gaggtcctcg tggacaggcc aggcaggtgg gcctcaggag 150  
gtgcctccag gcggccagtg ggctgaggc cccagcaagg gctaggggtcc 200  
atctccagtc ccaggacaca gcagcggcca ccatggccac gcctggggtc 250  
cagcagcatc agcagcccc aggaccgggg aggcacaggt ggccccacc 300  
accggaggga gcagctcctg cccctgtccg ggggatgact gattctctc 350  
cgccaggcca cccagaggag aaggccacc cgctggagg cacaggccat 400  
gaggggtct caggaggtgc tgctgatgtg gcttctggtg ttggcagtgg 450  
gcggcacaga gcacgctac cggcccggcc gtaggggtgtg tgctgtccg 500

gctcacgggg accctgtctc cgagtcgttc gtgcagcgtg tgtaccagcc 550  
 ctctctcacc acctgcgacg ggcaccgggc ctgcagcacc taccgaacca 600  
 tctataggac cgcctaccgc cgcagccctg ggctggcccc tgccaggcct 650  
 cgctacgcgt gctgccccgg ctggaagagg accagcgggc ttcttggggc 700  
 ctgtggagca gcaatatgcc agccgccatg ccggaacgga gggagctgtg 750  
 tccagcctgg ccgctgccgc tgccctgcag gatggcgggg tgacacttgc 800  
 cagtcagatg tggatgaatg cagtgcctagg aggggcggct gtccccagcg 850  
 ctgcatcaac accgccggca gttactgggt ccagtggttg gaggggcaca 900  
 gcctgtctgc agacggtaca ctctgtgtgc ccaagggagg gccccccagg 950  
 gtggccccca acccgacagg agtggacagt gcaatgaagg aagaagtgc 1000  
 gaggctgcag tccaggggtg acctgctgga ggagaagctg cagctggtgc 1050  
 tggccccact gcacagcctg gcctgcaggg cactggagca tgggctcccg 1100  
 gacccccgca gcctcctggg gcactccttc cagcagctcg gccgcatcga 1150  
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 aatgaaacgt gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
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 gcccaacttg ttattgcag cttataatgg ttacaaat 1738

<210> 506

<211> 273

<212> PRT

<213> Homo sapiens

<400> 506

Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu

1

5

10

15

Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	20	25	30
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	35	40	45
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	50	55	60
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	65	70	75
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	80	85	90
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	95	100	105
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	110	115	120
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	125	130	135
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	140	145	150
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	155	160	165
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	170	175	180
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	185	190	195
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	200	205	210
Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	215	220	225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	230	235	240
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu	245	250	255
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys	260	265	270

Lys Asp Ser

<210> 507  
 <211> 1700  
 <212> DNA  
 <213> Homo sapiens

<400> 507

gccaggcagg tgggcctcag gaggtgcctc caggcggcca gtgggcctga 50  
ggccccagca agggctaggg tccatctcca gtcccaggac acagcagcgg 100  
ccaccatggc cacgcctggg ctccagcagc atcagagcag cccctgtggt 150  
tggcagcaaa gttcagcttg gctgggcccg ctgtgagggg cttcgcgcta 200  
cgccctgcgg tgtcccaggg gctgaggtct cctcatcttc tccctagcag 250  
tggatgagca acccaacggg ggcccgggga ggggaactgg ccccagggga 300  
gaggaacccc aaagccacat ctgtagccag gatgagcagt gtgaatccag 350  
gcagcccccga ggaccgggga ggcacaggtg gccccacca cccggaggag 400  
cagctcctgc cctgtccgg gggatgactg attctcctcc gccaggccac 450  
ccagaggaga aggccacccc gcctggaggc acaggccatg aggggctctc 500  
aggaggtgct gctgatgtgg cttctggtgt tggcagtggg cggcacagag 550  
cacgcctacc ggcccggccg tagggtgtgt gctgtccggg ctcacgggga 600  
ccctgtctcc gagtcgttcg tgcagcgtgt gtaccagccc ttcctacca 650  
cctgcgacgg gcaccgggcc tgcagcacct accgaacat ctataggacc 700  
gcctaccgcc gcagccctgg gctggcccct gccaggcctc gctacgcgtg 750  
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caatatgcc gcccgcctgc cggaacggag ggagctgtgt ccagcctggc 850  
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cggggtgact gagcggaagg ccaggcaggg ccttcctcct cttcctcctc 1450

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tctctgtgaa tccacccctg gctaccacca ccttgggtac cccaacggca 1550  
tcccaaggcc aggtggaccc tcagctgagg gaaggtacga gctccctgct 1600  
ggagcctggg acccatggca caggccaggc agcccgagg ctgggtgggg 1650  
cctcagtggg ggctgctgcc tgacccccag cacaataaaa atgaaacgtg 1700

<210> 508  
<211> 273  
<212> PRT  
<213> Homo sapiens

<400> 508  
Met Arg Gly Ser Gln Glu Val Leu Leu Met Trp Leu Leu Val Leu  
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20 25 30  
Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val  
35 40 45  
Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg  
50 55 60  
Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg  
65 70 75  
Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro  
80 85 90  
Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala  
95 100 105  
Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro  
110 115 120  
Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln  
125 130 135  
Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln  
140 145 150  
Arg Cys Ile Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu  
155 160 165  
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly  
170 175 180  
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala  
185 190 195  
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu  
200 205 210

Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala
				215					220					225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu
				230					235					240
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu
				245					250					255
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys
				260					265					270

Lys Asp Ser

<210> 509  
 <211> 1538  
 <212> DNA  
 <213> Homo sapiens

<400> 509  
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 acaggccagg caggtgggcc tcaggagggtg cctccaggcg gccagtgggc 100  
 ctgaggcccc agcaagggct aggggtccatc tccagtccca ggacacagca 150  
 gcggccacca tggccacgcc tggggtccag cagcatcagc agccccagg 200  
 accggggagg cacaggtggc cccaccacc cggaggagca gctcctgccc 250  
 ctgtccgggg gatgactgat tctcctccgc caggccaccc agaggagaag 300  
 gccaccccg cctggaggcac aggccatgag gggctctcag gaggtgctgc 350  
 tgatgtggct tctggtgttg gcagtgggcg gcacagagca cgcctaccgg 400  
 cccggccgta ggggtgtgtg tgctccgggt caacggggacc ctgtctccga 450  
 gtcgttcgtg cagcgtgtgt accagccctt cctcaccacc tgcgacgggc 500  
 accgggcctg cagcacctac cgaaccatct ataggaccgc ctaccgccgc 550  
 agccctgggc tggccctg caggcctcgc tacgcgtgct gccccggctg 600  
 gaagaggacc agcgggcttc ctggggcctg tggagcagca atatgccagc 650  
 cgccatgccg gaacggaggg agctgtgtcc agcctggccg ctgccgctgc 700  
 cctgcaggat ggcggggtga cacttgccag tcagatgtgg atgaatgcag 750  
 tgctaggagg ggcgggtgtc cccagcgtg cgtcaacacc gccggcagtt 800  
 actggtgcca gtgttgggag gggcacagcc tgtctgcaga cggtaactc 850  
 tgtgtgcca agggagggcc cccaggggtg gcccacaacc cgacaggagt 900  
 ggacagtgca atgaaggaag aagtgcagag gctgcagtcc aggggtggacc 950

tgctggagga gaagctgcag ctggtgctgg cccactgca cagcctggcc 1000  
 tcgcaggcac tggagcatgg gctccccggac cccggcagcc tcttggtgca 1050  
 ctccttccag cagctcggcc gcacgactc cctgagcgag cagatttct 1100  
 tcttgaggga gcagctgggg tctgtctct gcaagaaaga ctcgtgactg 1150  
 cccagcgccc caggtctggac tgagcccctc acgccgcct gcagccccc 1200  
 tgcccctgcc caacatgctg ggggtccaga agccacctcg gggtgactga 1250  
 gcggaaggcc aggcagggcc ttctctctt tctctctccc ctctctcggg 1300  
 aggtcccca gacctggca tgggatgggc tgggatcttc tctgtgaatc 1350  
 caccctggc taccaccacc ctggctaccc caacggcatc ccaaggccag 1400  
 gtgggccctc agctgagga aggtacgagc tccctgctgg agcctgggac 1450  
 ccatggcaca ggccaggcag cccggaggct ggggtggggc tcagtggggg 1500  
 ctgctgctg acccccagca caataaaaat gaaacgtg 1538

<210> 510  
 <211> 273  
 <212> PRT  
 <213> Homo sapiens

<400> 510  
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 20 25 30  
 Cys Ala Val Arg Ala His Gly Asp Pro Val Ser Glu Ser Phe Val  
 35 40 45  
 Gln Arg Val Tyr Gln Pro Phe Leu Thr Thr Cys Asp Gly His Arg  
 50 55 60  
 Ala Cys Ser Thr Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg  
 65 70 75  
 Ser Pro Gly Leu Ala Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro  
 80 85 90  
 Gly Trp Lys Arg Thr Ser Gly Leu Pro Gly Ala Cys Gly Ala Ala  
 95 100 105  
 Ile Cys Gln Pro Pro Cys Arg Asn Gly Gly Ser Cys Val Gln Pro  
 110 115 120  
 Gly Arg Cys Arg Cys Pro Ala Gly Trp Arg Gly Asp Thr Cys Gln  
 125 130 135  
 Ser Asp Val Asp Glu Cys Ser Ala Arg Arg Gly Gly Cys Pro Gln

	140	145	150
Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu	155	160	165
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly	170	175	180
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala	185	190	195
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu	200	205	210
Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala	215	220	225
Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu	230	235	240
Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu	245	250	255
Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys	260	265	270

Lys Asp Ser

<210> 511  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 511  
 tggagcagca atatgccagc c 21

<210> 512  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 512  
 ttttccactc ctgtcgggtt gg 22

<210> 513  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe



<400> 513  
ggtgacactt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 514  
<211> 2690  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2039-2065  
<223> unknown base

<400> 514  
ggttgccaca gctggtttag ggccccgacc actggggccc cttgtcagga 50  
ggagacagcc tcccggcccg gggaggacaa gtcgctgcca cctttggctg 100  
ccgacgtgat tccctgggac ggtccgtttc ctgcccgtcag ctgccggccg 150  
agttgggtct ccgtgtttca ggccggctcc cccttccctgg tctcccttct 200  
cccgtctgggc cggtttatcg ggaggagatt gtcttccagg gctagcaatt 250  
ggacttttga tgatgtttga cccagcggca ggaatagcag gcaacgtgat 300  
ttcaaagctg ggctcagcct ctgtttcttc tctcgtgtaa tgcgaaaacc 350  
cattttggag caggaattcc aatcatgtct gtgatgggtg tgagaaagaa 400  
ggtgacacgg aaatgggaga aactcccagg caggaacacc ttttgctgtg 450  
atggccgcgt catgatggcc cggcaaaagg gcattttcta cctgaccctt 500  
ttcctcatcc tggggacatg tacactcttc ttgcctttg agtgccgcta 550  
cctggctgtt cagctgtctc ctgccatccc tgtatttgct gccatgctct 600  
tccttttctc catggctaca ctgttgagga ccagcttcag tgaccctgga 650  
gtgattcctc gggcgctacc agatgaagca gctttcatag aaatggagat 700  
agaagctacc aatggtgccg tgccccaggg ccagcgacca ccgcctcgta 750  
tcaagaattt ccagataaac aaccagattg tgaaactgaa atactgttac 800  
acatgaaga tcttcgggcc tccccgggcc tcccattgca gcattctgtga 850  
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atctttgaaa attggcttct tggagacatt gaaagaaact cctggaactg 1050  
ttctagaagt cctcatttgc ttctttacac tctgggtccg cgtgggactg 1100

actggatttc atactttcct cgtggctctc aaccagacaa ccaatgaaga 1150  
 catcaaagga tcatggacag ggaagaatcg cgtccagaat ccctacagcc 1200  
 atggcaatat tgtgaagaac tgctgtgaag tgctgtgtgg ccccttgccc 1250  
 cccagtgtgc tggatcgaag gggatatttg ccactggagg aaagtggaag 1300  
 tcgacctccc agtactcaag agaccagtag cagcctcttg ccacagagcc 1350  
 cagccccccac agaacacctg aactcaaatg agatgccgga ggacagcagc 1400  
 actcccgaag agatgccacc tccagagccc ccagagccac cacaggaggc 1450  
 agctgaagct gagaagtagc ctatctatgg aagagacttt tgtttgtgtt 1500  
 taattagggc tatgagagat ttcaggtgag aagttaaacc tgagacagag 1550  
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 gggatcctaa ctgggttctt ggggtcttca ggactgaaga ggaggagag 1950  
 tggggtcaga agattctcct ggccaccaag tgccagcatt gccacaaaat 2000  
 ccttttagga atgggacagg taccttcac ttgttgtann nnnnnnnnnn 2050  
 nnnnnnnnnn nnnnttggt tttccttttg actcctgctc ccattaggag 2100  
 caggaatggc agtaataaaa gtctgcactt tggtcatttc tttcctcag 2150  
 aggaagcccc agtgctcact taaacactat cccctcagac tcctgtgtg 2200  
 aggctgcag aggcctgaa tgcacaaatg ggaaaccaag gcacagagag 2250  
 gctctcctct cctctcctct ccccgatgt accctcaaaa aaaaaaaaaat 2300  
 gctaaccagt tcttcatta agcctcggt gagtgaggga aagcccagca 2350  
 ctgctgccct ctgggtaac tcacctaaag gcctcgccc acctctggct 2400  
 atggtaacca cactgggggc ttcctccaag cccgctctt ccagcattc 2450  
 caccggcaga gtcccagagc cacttcaccc tgggggtggg ctgtggcccc 2500  
 cagtcagctc tgctcaggac ctgctctatt tcagggaaga agatttatgt 2550

attatatgtg gctatatattc ctagagcacc tgtgttttcc tctttctaag 2600  
ccagggtcct gtctggatga cttatgcggt gggggagtgt aaaccggaac 2650  
ttttcatcta tttgaaggcg attaaactgt gtctaatagca 2690

<210> 515  
<211> 364  
<212> PRT  
<213> Homo sapiens

<400> 515  
Met Ser Val Met Val Val Arg Lys Lys Val Thr Arg Lys Trp Glu  
1 5 10 15  
Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met  
20 25 30  
Met Ala Arg Gln Lys Gly Ile Phe Tyr Leu Thr Leu Phe Leu Ile  
35 40 45  
Leu Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu  
50 55 60  
Ala Val Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu  
65 70 75  
Phe Leu Phe Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp  
80 85 90  
Pro Gly Val Ile Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile  
95 100 105  
Glu Met Glu Ile Glu Ala Thr Asn Gly Ala Val Pro Gln Gly Gln  
110 115 120  
Arg Pro Pro Pro Arg Ile Lys Asn Phe Gln Ile Asn Asn Gln Ile  
125 130 135  
Val Lys Leu Lys Tyr Cys Tyr Thr Cys Lys Ile Phe Arg Pro Pro  
140 145 150  
Arg Ala Ser His Cys Ser Ile Cys Asp Asn Cys Val Glu Arg Phe  
155 160 165  
Asp His His Cys Pro Trp Val Gly Asn Cys Val Gly Lys Arg Asn  
170 175 180  
Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser Leu Ser Leu Leu Thr  
185 190 195  
Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val Ala Leu Lys Ser  
200 205 210  
Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr Pro Gly Thr  
215 220 225  
Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser Val Val

230	235	240
Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln Thr		
245	250	255
Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val		
260	265	270
Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu		
275	280	285
Val Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Arg Gly		
290	295	300
Ile Leu Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln		
305	310	315
Glu Thr Ser Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu		
320	325	330
His Leu Asn Ser Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu		
335	340	345
Glu Met Pro Pro Pro Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala		
350	355	360
Glu Ala Glu Lys		

<210> 516  
 <211> 255  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 36, 38, 88, 118, 135, 193, 213, 222  
 <223> unknown base

<400> 516  
 aaaaccctgt attttttaca atgcaaatac acaatnancc tggaggtctt 50  
 tgaattaggt attatagggg tgggtgggggtt gatttttntt cctggaggct 100  
 tttggctttg gactctcnct ttctcccaca gagcncttcg accatcactg 150  
 cccctgggtg gggaattgtg ttggaaagag gaactaccgc tanttctacc 200  
 tcttcacctt ttntctctcc cncctcacia tctatgtctt cgccttcaac 250  
 atcgt 255

<210> 517  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 517  
caacgtgatt tcaaagctgg gctc 24

<210> 518

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518  
gcctcgtatc aagaatttcc 20

<210> 519

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519  
agtgggaagtc gacctccc 18

<210> 520

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520  
ctcacctgaa atctctcata gccc 24

<210> 521

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521  
cgcaaaaaccc attttgggag caggaattcc aatcatgtct gtgatgggtgg 50

<210> 522

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 522

gttgtgtcct tcagcaaac agtggattta aatctccttg cacaagcttg 50

agagcaacac aatctatcag gaaagaaaga aagaaaaaaa ccgaacctga 100

caaaaaagaa gaaaaagaag aagaaaaaaa atcatgaaaa ccatccagcc 150  
aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200  
tgtgtctctt ccaaggagtg cccgtgcgca gcggagatgc caccttcccc 250  
aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccaccctcag 300  
gtgcactatt gacaaccggg tcaccgggtt ggcttggtta aaccgcagca 350  
ccatcctcta tgctgggaat gacaagtggg gcctggatcc tcgcgtgggtc 400  
cttctgagca acacccaaac gcagtacagc atcgagatcc agaacgtgga 450  
tgtgtatgac gagggccctt acacctgctc ggtgcagaca gacaaccacc 500  
caaagacctc tagggccac ctcattgtgc aagtatctcc caaaattgta 550  
gagatttctt cagatatctc cattaatgaa gggaacaata ttagcctcac 600  
ctgcatagca actggttagac cagagcctac gggttacttg agacacatct 650  
ctcccaaagc ggttggcttt gtgagtgaag acgaatactt ggaaattcag 700  
ggcatcaccg gggagcagtc aggggactac gagtgcagtg cctccaatga 750  
cgtggccgcg cccgtggtac ggagagtaaa ggtcacctg aactatccac 800  
catacatttc agaagccaag ggtacagggtg tccccgtggg acaaaagggg 850  
acactgcagt gtgaagcctc agcagtcctc tcagcagaat tccagtggta 900  
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tatgggaact acacttgctt ggcctccaac aagctgggac acaccaatgc 1050  
cagcatcatg ctatttggtc caggcgccgt cagcgagggt agcaacggca 1100  
cgtcgaggag ggcaggctgc gtctggctgc tgctcttctt ggtcttgac 1150  
ctgcttctca aattttgatg tgagtgccac ttccccaccc gggaaaggct 1200  
gcgcccacca ccaccaccaa cacaacagca atggcaacac cgacagcaac 1250  
caatcagata tatacaaatg aaattagaag aaacacagcc tcatgggaca 1300  
gaaatttgag ggaggggaac aaagaatact ttggggggaa aagagtttta 1350  
aaaaagaaat tgaaaattgc cttgcagata tttagggtaca atggagtttt 1400  
cttttcccaa acgggaagaa cacagcacac cgggcttga cccactgcaa 1450  
gctgcatcgt gcaacctctt tgggtgccagt gtgggcaagg gctcagcctc 1500  
tctgcccaca gagtgcctcc acgtggaaca ttctggagct ggccatccca 1550

aattcaatca gtccatagag acgaacagaa tgagaccttc cggcccaagc 1600

gtggcgctgc gggcactttg gtagactgtg ccaccacggc gtgtgttgtg 1650

aaacgtgaaa taaaaagagc aaaaaaaaaa 1679

<210> 523

<211> 344

<212> PRT

<213> Homo sapiens

<400> 523

Met Lys Thr Ile Gln Pro Lys Met His Asn Ser Ile Ser Trp Ala  
1 5 10 15

Ile Phe Thr Gly Leu Ala Ala Leu Cys Leu Phe Gln Gly Val Pro  
20 25 30

Val Arg Ser Gly Asp Ala Thr Phe Pro Lys Ala Met Asp Asn Val  
35 40 45

Thr Val Arg Gln Gly Glu Ser Ala Thr Leu Arg Cys Thr Ile Asp  
50 55 60

Asn Arg Val Thr Arg Val Ala Trp Leu Asn Arg Ser Thr Ile Leu  
65 70 75

Tyr Ala Gly Asn Asp Lys Trp Cys Leu Asp Pro Arg Val Val Leu  
80 85 90

Leu Ser Asn Thr Gln Thr Gln Tyr Ser Ile Glu Ile Gln Asn Val  
95 100 105

Asp Val Tyr Asp Glu Gly Pro Tyr Thr Cys Ser Val Gln Thr Asp  
110 115 120

Asn His Pro Lys Thr Ser Arg Val His Leu Ile Val Gln Val Ser  
125 130 135

Pro Lys Ile Val Glu Ile Ser Ser Asp Ile Ser Ile Asn Glu Gly  
140 145 150

Asn Asn Ile Ser Leu Thr Cys Ile Ala Thr Gly Arg Pro Glu Pro  
155 160 165

Thr Val Thr Trp Arg His Ile Ser Pro Lys Ala Val Gly Phe Val  
170 175 180

Ser Glu Asp Glu Tyr Leu Glu Ile Gln Gly Ile Thr Arg Glu Gln  
185 190 195

Ser Gly Asp Tyr Glu Cys Ser Ala Ser Asn Asp Val Ala Ala Pro  
200 205 210

Val Val Arg Arg Val Lys Val Thr Val Asn Tyr Pro Pro Tyr Ile  
215 220 225

Ser Glu Ala Lys Gly Thr Gly Val Pro Val Gly Gln Lys Gly Thr

230	235	240
Leu Gln Cys Glu Ala Ser Ala Val Pro Ser Ala Glu Phe Gln Trp		
245	250	255
Tyr Lys Asp Asp Lys Arg Leu Ile Glu Gly Lys Lys Gly Val Lys		
260	265	270
Val Glu Asn Arg Pro Phe Leu Ser Lys Leu Ile Phe Phe Asn Val		
275	280	285
Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys		
290	295	300
Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala		
305	310	315
Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val		
320	325	330
Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe		
335	340	

<210> 524  
 <211> 503  
 <212> DNA  
 <213> Homo sapiens

<400> 524  
 gaaaaaaaat catgaaaacc atccagccaa aaatgcacaa ttctatctct 50  
 tgggcaatct tcacggggct ggctgctctg tgtctcttcc aaggagtgcc 100  
 cgtgcgcagc ggagatgccā ccttccccaā agctatggac aacgtgacgg 150  
 tccggcaggg ggagagcgcc accctcaggt gcactattga caaccgggtc 200  
 acccgggtgg cctggctaaa ccgcagcacc atcctctatg ctgggaatga 250  
 caagtgggtgc ctggatcctc gcgtggctct tctgagcaac acccaaacgc 300  
 agtacagcat cgagatccag aacgtggatg tgtatgacga gggcccttac 350  
 acctgctcgg tgcagacaga caaccacca aagaccteta ggtccacct 400  
 cattgtgcaa gtatctccca aaattgtaga gatttcttca gatatctcca 450  
 ttaatgaagg gaacaatatt agcctcacct gcatagcaac tggtagacca 500  
 gag 503

<210> 525  
 <211> 2602  
 <212> DNA  
 <213> Homo sapiens

<400> 525  
 atggctggtg acggcggggc cgggcagggg accggggccg cggcccggga 50



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 tgaacgtcgc gctgcaggag ctgggagctg gcagcaacgt gggattccag 150  
 aaggggacaa gacagctgtt aggctcacgc acgcagctgg agctgggtctt 200  
 agcaggtgcc tctctactgc tggctgcact gcttctgggc tgccttgtgg 250  
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 ggtgagcccc tgtgaggact tttaccagtt ctctgtggg ggctggattc 400  
 ggaggaaccc cctgcccgat gggcgttctc gctggaacac cttcaacagc 450  
 ctctgggacc aaaaccaggc catactgaag cacctgcttg aaaacaccac 500  
 cttcaactcc agcagtgaag ctgagcagaa gacacagcgc ttctacctat 550  
 cttgcctaca ggtggagcgc attgaggagc tgggagccca gccactgaga 600  
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 ggacaacttt atggaggtgt tgaaggcagt agcagggacc tacagggcca 700  
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 aatgttatcc aggtggacca gtctgggctc tttctgccct ctggggatta 800  
 ctacttaaac agaactgcca atgagaaagt gctcactgcc tatctggatt 850  
 acatggagga actggggatg ctgctgggtg ggcggccac ctccacgagg 900  
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 agtgccccag gaccagcggc gcgacgagga gaagatctac cacaagatga 1000  
 gcatttcgga gctgcaggct ctggcgccct ccatggactg gcttgagttc 1050  
 ctgtctttct tgctgtcacc attggagttg agtgactctg agcctgtggt 1100  
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 cggaaccaag catcctgaac aattacctga tctggaacct ggtgcaaaag 1200  
 acaacctcaa gcctggaccg acgctttgag tctgcacaag agaagctgct 1250  
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gatatgattg gtttcccaga ctttatcctg gagcccaaag agctggatga 1550  
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tgtagcctt ccggaaccac acggcctgca tggaggaaca gtacaatcaa 1950  
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ggctgagaaa gcatggggag gagcagcaac tgccagccgt ggggctcacc 2100  
aaccaccagc tcttcttctg gggatttgcc caggtaggtg gctcggctccg 2150  
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cagaccctcc tcaatcacca cattgtgct ctgctttggg ggtgcccctg 2500  
cctccagcag agccccacc attcactgtg acatctttcc gtgtcaccct 2550  
gcctggaaga ggtctgggtg gggaggccag ttcccatagg aaggagtctg 2600

cc 2602

<210> 526

<211> 736

<212> PRT

<213> Homo sapiens

<400> 526

Met	Asn	Val	Ala	Leu	Gln	Glu	Leu	Gly	Ala	Gly	Ser	Asn	Val	Gly
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Phe	Gln	Lys	Gly	Thr	Arg	Gln	Leu	Leu	Gly	Ser	Arg	Thr	Gln	Leu
				20					25					30

Glu	Leu	Val	Leu	Ala	Gly	Ala	Ser	Leu	Leu	Leu	Ala	Ala	Leu	Leu		35	40	45
Leu	Gly	Cys	Leu	Val	Ala	Leu	Gly	Val	Gln	Tyr	His	Arg	Asp	Pro		50	55	60
Ser	His	Ser	Thr	Cys	Leu	Thr	Glu	Ala	Cys	Ile	Arg	Val	Ala	Gly		65	70	75
Lys	Ile	Leu	Glu	Ser	Leu	Asp	Arg	Gly	Val	Ser	Pro	Cys	Glu	Asp		80	85	90
Phe	Tyr	Gln	Phe	Ser	Cys	Gly	Gly	Trp	Ile	Arg	Arg	Asn	Pro	Leu		95	100	105
Pro	Asp	Gly	Arg	Ser	Arg	Trp	Asn	Thr	Phe	Asn	Ser	Leu	Trp	Asp		110	115	120
Gln	Asn	Gln	Ala	Ile	Leu	Lys	His	Leu	Leu	Glu	Asn	Thr	Thr	Phe		125	130	135
Asn	Ser	Ser	Ser	Glu	Ala	Glu	Gln	Lys	Thr	Gln	Arg	Phe	Tyr	Leu		140	145	150
Ser	Cys	Leu	Gln	Val	Glu	Arg	Ile	Glu	Glu	Leu	Gly	Ala	Gln	Pro		155	160	165
Leu	Arg	Asp	Leu	Ile	Glu	Lys	Ile	Gly	Gly	Trp	Asn	Ile	Thr	Gly		170	175	180
Pro	Trp	Asp	Gln	Asp	Asn	Phe	Met	Glu	Val	Leu	Lys	Ala	Val	Ala		185	190	195
Gly	Thr	Tyr	Arg	Ala	Thr	Pro	Phe	Phe	Thr	Val	Tyr	Ile	Ser	Ala		200	205	210
Asp	Ser	Lys	Ser	Ser	Asn	Ser	Asn	Val	Ile	Gln	Val	Asp	Gln	Ser		215	220	225
Gly	Leu	Phe	Leu	Pro	Ser	Arg	Asp	Tyr	Tyr	Leu	Asn	Arg	Thr	Ala		230	235	240
Asn	Glu	Lys	Val	Leu	Thr	Ala	Tyr	Leu	Asp	Tyr	Met	Glu	Glu	Leu		245	250	255
Gly	Met	Leu	Leu	Gly	Gly	Arg	Pro	Thr	Ser	Thr	Arg	Glu	Gln	Met		260	265	270
Gln	Gln	Val	Leu	Glu	Leu	Glu	Ile	Gln	Leu	Ala	Asn	Ile	Thr	Val		275	280	285
Pro	Gln	Asp	Gln	Arg	Arg	Asp	Glu	Glu	Lys	Ile	Tyr	His	Lys	Met		290	295	300
Ser	Ile	Ser	Glu	Leu	Gln	Ala	Leu	Ala	Pro	Ser	Met	Asp	Trp	Leu		305	310	315
Glu	Phe	Leu	Ser	Phe	Leu	Leu	Ser	Pro	Leu	Glu	Leu	Ser	Asp	Ser				

320										325					330				
Glu	Pro	Val	Val	Val	Tyr	Gly	Met	Asp	Tyr	Leu	Gln	Gln	Val	Ser					
				335					340					345					
Glu	Leu	Ile	Asn	Arg	Thr	Glu	Pro	Ser	Ile	Leu	Asn	Asn	Tyr	Leu					
				350					355					360					
Ile	Trp	Asn	Leu	Val	Gln	Lys	Thr	Thr	Ser	Ser	Leu	Asp	Arg	Arg					
				365					370					375					
Phe	Glu	Ser	Ala	Gln	Glu	Lys	Leu	Leu	Glu	Thr	Leu	Tyr	Gly	Thr					
				380					385					390					
Lys	Lys	Ser	Cys	Val	Pro	Arg	Trp	Gln	Thr	Cys	Ile	Ser	Asn	Thr					
				395					400					405					
Asp	Asp	Ala	Leu	Gly	Phe	Ala	Leu	Gly	Ser	Leu	Phe	Val	Lys	Ala					
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Thr	Phe	Asp	Arg	Gln	Ser	Lys	Glu	Ile	Ala	Glu	Gly	Met	Ile	Ser					
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Glu	Ile	Arg	Thr	Ala	Phe	Glu	Glu	Ala	Leu	Gly	Gln	Leu	Val	Trp					
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Met	Asp	Glu	Lys	Thr	Arg	Gln	Ala	Ala	Lys	Glu	Lys	Ala	Asp	Ala					
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Ile	Tyr	Asp	Met	Ile	Gly	Phe	Pro	Asp	Phe	Ile	Leu	Glu	Pro	Lys					
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Glu	Leu	Asp	Asp	Val	Tyr	Asp	Gly	Tyr	Glu	Ile	Ser	Glu	Asp	Ser					
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Phe	Phe	Gln	Asn	Met	Leu	Asn	Leu	Tyr	Asn	Phe	Ser	Ala	Lys	Val					
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Arg	Asn	His	Pro	Lys	Ala	Leu	Asn	Phe	Gly	Gly	Ile	Gly	Val	Val					
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Met	Gly	His	Glu	Leu	Thr	His	Ala	Phe	Asp	Asp	Gln	Gly	Arg	Glu					
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Tyr	Asp	Lys	Glu	Gly	Asn	Leu	Arg	Pro	Trp	Trp	Gln	Asn	Glu	Ser					
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Leu	Gly	Thr	Leu	Ser	Asn	Ser	Arg	Asp	Phe	Leu	Arg	His	Phe	Gly
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<212> DNA

<213> Artificial Sequence

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<400> 562

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<210> 563



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 <212> PRT  
 <213> Homo Sapien

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 65 70 75  
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 Gln His Thr Pro Arg Thr Met Gln Val His Leu Thr Val Gln Val  
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 Glu Asn Gly Gln Tyr Leu Asp Ile Tyr Gly Ile Thr Arg Asp Gln  
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 Asp Val Arg Lys Val Lys Val Val Val Asn Phe Ala Pro Thr Ile  
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245	250	255
Tyr Lys Gly Glu Lys Lys Leu Phe Asn Gly Gln Gln Gly Ile Ile		
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275	280	285
Thr Gln Glu His Phe Gly Asn Tyr Thr Cys Val Ala Ala Asn Lys		
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Leu Gly Thr Thr Asn Ala Ser Leu Pro Leu Asn Pro Pro Ser Thr		
305	310	315
Ala Gln Tyr Gly Ile Thr Gly Ser Ala Asp Val Leu Phe Ser Cys		
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 <212> DNA  
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<213> Homo Sapien

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Val	Leu	Glu	Met	Tyr	Phe	Leu	Asn	Asp	Thr	Leu	Ala	Ala	Glu	Asp	80	85	90
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Thr	Trp	Val	Arg	Val	Ser	His	Glu	His	Leu	Leu	Gln	Arg	Val	Asp	125	130	135
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470	475	480
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<212> DNA

<213> Homo Sapien

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 <212> PRT  
 <213> Homo Sapien

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 Leu Gly Val Gln Ala Met Pro Ala Asn Arg Leu Ser Cys Tyr Arg  
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 Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val  
 35 40 45  
 Ala Asp Leu Thr Gln Ile Asp Val Asn Val Gln Asp His Phe Trp  
 50 55 60  
 Asp Gly Lys Gly Cys Glu Met Ile Cys Tyr Cys Asn Phe Ser Glu  
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 Phe Val Ile Pro Cys Asn Asn Gln  
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 <211> 2558  
 <212> DNA  
 <213> Homo Sapien

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 ggggtcccggg aggcgcgctc tgctcgcgcc gagatgtgga atctccttca 200  
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<210> 618

<211> 750

<212> PRT

<213> Homo Sapien

<400> 618

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Arg	Arg	Pro	Arg	Trp	Leu	Cys	Ala	Gly	Ala	Leu	Val	Leu	Ala	Gly
				20					25					30

Gly	Phe	Phe	Leu	Leu	Gly	Phe	Leu	Phe	Gly	Trp	Phe	Ile	Lys	Ser
			35						40					45

Ser	Asn	Glu	Ala	Thr	Asn	Ile	Thr	Pro	Lys	His	Asn	Met	Lys	Ala
			50						55					60

Phe	Leu	Asp	Glu	Leu	Lys	Ala	Glu	Asn	Ile	Lys	Lys	Phe	Leu	His
			65						70					75

Asn	Phe	Thr	Gln	Ile	Pro	His	Leu	Ala	Gly	Thr	Glu	Gln	Asn	Phe
			80						85					90

Gln	Leu	Ala	Lys	Gln	Ile	Gln	Ser	Gln	Trp	Lys	Glu	Phe	Gly	Leu	95	100	105
Asp	Ser	Val	Glu	Leu	Ala	His	Tyr	Asp	Val	Leu	Leu	Ser	Tyr	Pro	110	115	120
Asn	Lys	Thr	His	Pro	Asn	Tyr	Ile	Ser	Ile	Ile	Asn	Glu	Asp	Gly	125	130	135
Asn	Glu	Ile	Phe	Asn	Thr	Ser	Leu	Phe	Glu	Pro	Pro	Pro	Pro	Gly	140	145	150
Tyr	Glu	Asn	Val	Ser	Asp	Ile	Val	Pro	Pro	Phe	Ser	Ala	Phe	Ser	155	160	165
Pro	Gln	Gly	Met	Pro	Glu	Gly	Asp	Leu	Val	Tyr	Val	Asn	Tyr	Ala	170	175	180
Arg	Thr	Glu	Asp	Phe	Phe	Lys	Leu	Glu	Arg	Asp	Met	Lys	Ile	Asn	185	190	195
Cys	Ser	Gly	Lys	Ile	Val	Ile	Ala	Arg	Tyr	Gly	Lys	Val	Phe	Arg	200	205	210
Gly	Asn	Lys	Val	Lys	Asn	Ala	Gln	Leu	Ala	Gly	Ala	Lys	Gly	Val	215	220	225
Ile	Leu	Tyr	Ser	Asp	Pro	Ala	Asp	Tyr	Phe	Ala	Pro	Gly	Val	Lys	230	235	240
Ser	Tyr	Pro	Asp	Gly	Trp	Asn	Leu	Pro	Gly	Gly	Gly	Val	Gln	Arg	245	250	255
Gly	Asn	Ile	Leu	Asn	Leu	Asn	Gly	Ala	Gly	Asp	Pro	Leu	Thr	Pro	260	265	270
Gly	Tyr	Pro	Ala	Asn	Glu	Tyr	Ala	Tyr	Arg	Arg	Gly	Ile	Ala	Glu	275	280	285
Ala	Val	Gly	Leu	Pro	Ser	Ile	Pro	Val	His	Pro	Ile	Gly	Tyr	Tyr	290	295	300
Asp	Ala	Gln	Lys	Leu	Leu	Glu	Lys	Met	Gly	Gly	Ser	Ala	Pro	Pro	305	310	315
Asp	Ser	Ser	Trp	Arg	Gly	Ser	Leu	Lys	Val	Pro	Tyr	Asn	Val	Gly	320	325	330
Pro	Gly	Phe	Thr	Gly	Asn	Phe	Ser	Thr	Gln	Lys	Val	Lys	Met	His	335	340	345
Ile	His	Ser	Thr	Asn	Glu	Val	Thr	Arg	Ile	Tyr	Asn	Val	Ile	Gly	350	355	360
Thr	Leu	Arg	Gly	Ala	Val	Glu	Pro	Asp	Arg	Tyr	Val	Ile	Leu	Gly	365	370	375
Gly	His	Arg	Asp	Ser	Trp	Val	Phe	Gly	Gly	Ile	Asp	Pro	Gln	Ser			

380										385					390				
Gly	Ala	Ala	Val	Val	His	Glu	Ile	Val	Arg	Ser	Phe	Gly	Thr	Leu					
				395					400					405					
Lys	Lys	Glu	Gly	Trp	Arg	Pro	Arg	Arg	Thr	Ile	Leu	Phe	Ala	Ser					
				410					415					420					
Trp	Asp	Ala	Glu	Glu	Phe	Gly	Leu	Leu	Gly	Ser	Thr	Glu	Trp	Ala					
				425					430					435					
Glu	Glu	Asn	Ser	Arg	Leu	Leu	Gln	Glu	Arg	Gly	Val	Ala	Tyr	Ile					
				440					445					450					
Asn	Ala	Asp	Ser	Ser	Ile	Glu	Gly	Asn	Tyr	Thr	Leu	Arg	Val	Asp					
				455					460					465					
Cys	Thr	Pro	Leu	Met	Tyr	Ser	Leu	Val	His	Asn	Leu	Thr	Lys	Glu					
				470					475					480					
Leu	Lys	Ser	Pro	Asp	Glu	Gly	Phe	Glu	Gly	Lys	Ser	Leu	Tyr	Glu					
				485					490					495					
Ser	Trp	Thr	Lys	Lys	Ser	Pro	Ser	Pro	Glu	Phe	Ser	Gly	Met	Pro					
				500					505					510					
Arg	Ile	Ser	Lys	Leu	Gly	Ser	Gly	Asn	Asp	Phe	Glu	Val	Phe	Phe					
				515					520					525					
Gln	Arg	Leu	Gly	Ile	Ala	Ser	Gly	Arg	Ala	Arg	Tyr	Thr	Lys	Asn					
				530					535					540					
Trp	Glu	Thr	Asn	Lys	Phe	Ser	Gly	Tyr	Pro	Leu	Tyr	His	Ser	Val					
				545					550					555					
Tyr	Glu	Thr	Tyr	Glu	Leu	Val	Glu	Lys	Phe	Tyr	Asp	Pro	Met	Phe					
				560					565					570					
Lys	Tyr	His	Leu	Thr	Val	Ala	Gln	Val	Arg	Gly	Gly	Met	Val	Phe					
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Glu	Leu	Ala	Asn	Ser	Ile	Val	Leu	Pro	Phe	Asp	Cys	Arg	Asp	Tyr					
				590					595					600					
Ala	Val	Val	Leu	Arg	Lys	Tyr	Ala	Asp	Lys	Ile	Tyr	Ser	Ile	Ser					
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Met	Lys	His	Pro	Gln	Glu	Met	Lys	Thr	Tyr	Ser	Val	Ser	Phe	Asp					
				620					625					630					
Ser	Leu	Phe	Ser	Ala	Val	Lys	Asn	Phe	Thr	Glu	Ile	Ala	Ser	Lys					
				635					640					645					
Phe	Ser	Glu	Arg	Leu	Gln	Asp	Phe	Asp	Lys	Ser	Asn	Pro	Ile	Val					
				650					655					660					
Leu	Arg	Met	Met	Asn	Asp	Gln	Leu	Met	Phe	Leu	Glu	Arg	Ala	Phe					
				665					670					675					

Ile	Asp	Pro	Leu	Gly	Leu	Pro	Asp	Arg	Pro	Phe	Tyr	Arg	His	Val
				680					685					690
Ile	Tyr	Ala	Pro	Ser	Ser	His	Asn	Lys	Tyr	Ala	Gly	Glu	Ser	Phe
				695					700					705
Pro	Gly	Ile	Tyr	Asp	Ala	Leu	Phe	Asp	Ile	Glu	Ser	Lys	Val	Asp
				710					715					720
Pro	Ser	Lys	Ala	Trp	Gly	Glu	Val	Lys	Arg	Gln	Ile	Tyr	Val	Ala
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Ala	Phe	Thr	Val	Gln	Ala	Ala	Ala	Glu	Thr	Leu	Ser	Glu	Val	Ala
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<212> DNA

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<220>

<223> Synthetic oligonucleotide probe

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<210> 620

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 620

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<210> 621

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<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

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